SOUTHERN RHODESIA.

REPORT

ON

The Public Health

For the Year 1927.

Presented to the Legislative Assembly,
1928.

Salisbury, Rhodesia:
Printed by the Government Printer.
1928.

[C.S.R. 30—1928.]

971—600.28

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Report on the Public Health for the year 1928.

Page 1. There has been a very considerable awakened interest shown by the public in health problems during the year, especially in maternity and child welfare, venereal diseases, the management of hospitals, and public health generally.

The sudden death of the 1st medical inspector of schools is to be regretted he is a loss to the country. He inaugurated the system of school inspection in the Colony.

Page 2. Nursing training has been successful.

Page 4. A Lady medical inspector of schools was appointed the school service is doing good work, over 40% of the children were examined, a dental surgeon also examined them and submits a report.

Page 5. Regulations under the Public Health Act include more adequate control of small-pox, among natives.

The Medical Council as newly constituted met for the first time in September.

Page 6. Vital Statistics.

Population 48,750 of which 44,950 were Europeans.

Birth rate among Europeans 24.6 per mille against 24.3 in 1927.

Page 7, Crude death rate 10.6 per 1000 against 9.1 in 1927.

Page 8. Infant Mortality 72 per 1000 against 47 in 1927.

The increase was due to malaria, diarrhoea and general debility.

There

age 11. There was an increase in the number of cases of cerebro-spinal meningitis.

Small pox broke out in four districts after several years of complete immunity 214.685 vaccinations were performed. The disease spread from Northern Rhodesia and Portuguese East Africa.

There was an increase in the number of cases of enteric fever, due to the long drought, 72 cases against 45 in 1927.

There was little serious malaria in epidemic form but 545 Europeans were admitted to hospital. 37 cases with 19 deaths from blackwater fever were reported.

age 13. The Research Entomologist made a malarial survey of certain areas during the year.

age 14. The Tuberculosis incidence is increasing, notification is still imperfect. The public are still under the mistaken idea that Southern Rhodesia is suitable for persons affected with the disease.

Ankylostomiasis is not yet prevalent in the Colony, only 4 cases were reported during the year.

Leprosy.

age 15. There are 3 leper colonies, two are voluntary and are under the care of medical missions assisted by government funds.

A strong movement was inaugurated during the year to take vigorous steps to combat the spread of venereal diseases. There are 11 clinics for treatment of this disease.

age 17. 11.132 patients were admitted to general Hospitals against 9.409 in 1927.

age 19. The native mining population has increased from 41.635 in 1927 to 42.940 in 1928 deaths were 19.8 per mille, the highest on record since 1922. The largest increase in

in sickness and mortality rates was due to pneumonia.

Page 23. Child welfare clinics were started at Salisbury and Bulawayo.

There is a full report from the Medical inspector of schools in which he states on page 30 that 44.55% of the children examined gave a history of malaria, and a history of Blackwater fever was given by 32 children one of whom had four attacks.

Other reports from the Dental Surgeon, the public health laboratory and the Research Fellow are included as appendices.

The report is a good one and the public services are improving.

(Sd.)G.J.Rutherford.

30.7.29.

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PART I.

CHAPTER I.—ADMINISTRATION.

Interesting and informative extensions of public health administration have been effected during the past year, more especially in the direction of increased medical facilities for the natives.

The scope of the native dispensaries and native anti-venereal clinics has been enlarged, and increased sums have been devoted to their development; whilst medical mission work amongst the natives has received further Government recognition and support, and the grants-in-aid offered for this purpose have been defined and materially increased.

The attitude of the Government to maternity benefits has also been reviewed, and the Government subscriptions in this direction have been placed on a more equable basis in relation to the requirements of the various towns and districts.

Municipal and other local authorities continue to show a laudable appreciation of their duties in improved town planning and types of buildings erected, increase of water supplies, municipal baths and enlarged and more adequate sanitary services generally; keeping pace in these respects not only with public demands and increase of population, but in some instances being well in advance.

It is regretted that with all this there still is in some instances a lack of co-operation and co-ordination between the Public Health Department of the Colony and the municipal authorities, more especially where the subject in dispute applies to hospitals, maternity benefits, the isolation and treatment of infectious and contagious disease, and the relief of sick paupers, a state of affairs much to the disadvantage of the persons mostly concerned, namely, the sick and the destitute.

One of the weakest points of local control of the public health is a natural temptation to strive for the relief of the rates at the expense of the taxes of the country, and local authorities here do not differ in this respect from other countries. Doubtless there is much to be said in favour of a central bureau of health endowed with the fullest administrative and financial control of all public health matters pertaining to the Colony, including, *inter alia*, the erection and maintenance of hospitals and dispensaries, the establishment of school dental and ante-natal clinics, including child-welfare centres, the isolation of infectious disease, provision of all forms of maternity benefits, inspection of mines, factories and conditions of labour generally, urban and rural sanitation and hygiene, and, in fact, every matter which in any way relates to the health, happiness and well being of the citizens from the cradle to the grave.

The somewhat Prussian system of bureaucratic control as outlined above would certainly make for economy, uniformity and a high standard of efficiency, especially where applied to public institutions, but could not but prove prejudicial in the end to the individual seeking relief.

It is the soullessness of centrally controlled and bureaucratic forms of administration which impair their real efficiency and in the end destroy their usefulness to the general public, and the provision of hospitals and other institutions for the relief of sickness and destitution, and the number and nature of the technical and clerical staff to be employed become in this case matters of political rather than of local importance. The expenditure involved being dependent on what funds the Treasury may have available at the time, the arrest and treatment of disease, the proper and adequate hospitalisation of the sick, become subject to whether educational, agricultural, military or other services have prior claims on the resources of the State, and the tragedy is that the person who eventually suffers is the sick man or the ill-nurtured baby.

It is in order to remove everything which concerns the health of the community outside the influence of politics, and to bring them within the purview and the control of the people immediately concerned, that public health administration is largely handed over to local authorities, and the costs made a charge on local rates and outside of Treasury control.

In all communities which are large enough to be entrusted with the management of their own affairs, the care of the health of the people is, and should be, the first concern, and local authorities, be they municipal councils, sanitary or village management boards, become, with the help and guidance of the general medical practitioner, the first line of defence in the fight against any sickness or disease which threatens the communities under their immediate control, and in this fight their hands must be untrammelled with any other consideration than what are the reasonable requirements which must be provided in order to secure the maximum of relief to the sufferer, prevent the spread of infection, and arrest the processes of disease.

The duties of a distant central authority should be largely advisory, with an added responsibility for the organisation and supply of all special services, including particularly laboratory facilities, and the maintenance of research, all medical inspections, the preparation and co-ordination of public health and sanitary laws and enactments, and last, but not least, the distribution of financial assistance to the local authorities on scales approved of and fixed by Parliament.

In view of its ultimate effects upon the health of the people, this flirting with the germ of a central and autocratic Bureau of Health, dependent for its resources on Treasury funds alone, cannot fail to arouse a certain degree of anxiety in the minds of medical officers of health and others who are devoting time and thought to those social conditions which directly affect the well being of the people, and it is not out of place in our report on the progress of the public health to review from time to time the trend of public thought so far as it bears on matters of health, and where it is necessary to sound a warning.

As we now sow, so surely shall we reap in the years that are to come, and a hastily conceived policy, however expedient it may appear at the moment, may in the end re-act adversely on the very classes it is intended to assist, and it must be remembered that a policy once adopted by a Government, with the assumption of all its attendant responsibilities, cannot easily be abandoned either by them or even by their successors.

Establishment.—(a) *New Appointments.*—Dr. A. Clark, M.D., D.P.H., as Assistant Medical Inspector of Schools.

Mr. A. W. Facer, B.A., Oxon., F.I.C., as Government Analyst, Public Health Laboratory.

Mr. G. A. Taylor, M.A., Cantab., as Acting Chief Clerk.

Dr. J. H. Kennedy, M.B., B.Ch., D.T.M., as Assistant and Relieving Government Medical Officer.

Dr. G. B. Kirkland, L.R.C.P., L.R.C.S., London, as Aided Medical Officer, Citrus Estates, Mazoe, by arrangement with the British South Africa Company.

Dr. T. Donaldson, L.R.C.P., L.R.C.S., Edinburgh, L.F.P.S., Glasgow, as Aided Medical Officer at Selukwe.

Dr. R. F. Rand, M.D., F.R.C.S., England, D.P.H., as Aided Medical Officer at Hartley.

Dr. D. Milner, M.R.C.S., L.R.C.P., D.P.H., as Aided Medical Officer at Nyamandhlovu.

Miss E. Carnley, as Radiographer at Bulawayo Hospital.

Miss L. M. Walsh, as Dispenser at Bulawayo Hospital.

Miss A. J. Brice, as Dispenser at Salisbury Hospital.

Mr. E. Teasdale, as Secretary and Dispenser at Gwelo Hospital.

(b) *Resignations and Retirements.*—Dr. D. J. O'Keefe, Government Medical Officer, Mazoe, retired and was placed on pension.

Dr. S. R. P. Montgomery, Aided Medical Officer, Mtoko-Mrewa, resigned during the year.

Miss B. O. Read, Radiographer, Bulawayo Hospital, resigned during the year.

(c) *Transfers.*—Dr. R. J. W. Burrell, transferred from Selukwe to Concession.

Dr. M. Pearson, transferred from Plumtree to Bulawayo.

Dr. C. W. Robertson, transferred from Bulawayo to Plumtree.

Messrs. B. F. Wright, Chief Clerk, and C. S. Honey, Senior Clerk, were transferred to the office of the High Commissioner, London.

Mr. W. Procter, Hospital Secretary, Bulawayo, transferred to Head Office as Senior and Technical Clerk.

(d) *Leave.*—During the year vacation leave of absence was granted to the Medical Director, three Government medical officers, two aided medical officers, one laboratory assistant and one male and one lady clerk; whilst occasional leave was granted to three male clerks, three lady clerks, and one laboratory assistant, and serious indisposition leave to two Government medical officers, three lady clerks, and urgent private affairs leave to one laboratory assistant.

Nursing Service.—Applications were received from 106 qualified nurses; 28 were engaged.

The applications received were seasonal, and it so happend that in September and October no suitable applicants came forward. Because of this, two nurses were obtained from England. Miss Gordon, Matron of the Royal Victoria Nurses' Institute, Capetown, generously allowed several nurses to come from her institution, making it possible to meet the minimum requirements.

Thirteen qualified nurses left the Service, eight of whom left to get married. Three matrons reached retiring age.

Probationers.—Applications were received from 108 candidates outside Rhodesia and sixty-five from within our borders. Of the local candidates, from amongst whom all appointments were made, seven were engaged for Bulawayo Hospital and twenty-three for Salisbury. Three probationers resigned almost immediately after appointment on finding the work much harder than they had expected.

The disparity in numbers between Bulawayo and Salisbury was due largely to the opening of two new wards in the Salisbury Hospital. These two wards have been constantly full since the day they were opened.

Nine probationers completed their training—five at the Salisbury Hospital, and four at the Memorial Hospital, Bulawayo. Probationers entering for the Colonial Medical Council's trained nurses' examination maintained the high standard of previous years—one first, one second, one third and two fifth places being obtained. In accordance with custom, the probationer passing first was presented with a gold medal.

Financial.—The following figures show the expenditure under the Public Health and Hospital Votes under the respective headings for the year 1927, as compared with 1926, 1925, 1924 and 1923:—

Public Health (Expenditure).

	1927	1926	1925	1924	1923
	£	£	£	£	£
Staff, salaries	28,314	27,304	24,972	24,745	26,059
Travelling expenses, Medical Director and staff, Government Medical Officers, Bacteriologist, Compound Inspectors, and rail and port charges	6,329	5,453	4,100	3,673	3,694
Treatment, maintenance and transport of lunatics, lepers and sick paupers, repression of infectious and contagious diseases, upkeep of lazarettos, purchase of quinine and vaccine lymph, grants and subsidies	13,194	10,335	8,533	8,600	7,241
Public Health Laboratory and other Charges.					
Expenditure	2,257	1,568	594	400	329
Administration of Foods and Drugs Ordinance	53	79	107	191	256
Totals	50,147	44,739	38,306	37,609	37,579

Public Health (Revenue).

	1927	1926	1925	1924	1923
	£	£	£	£	£
Bacteriological fees	572	392	139	362	199
Sale of quinine	2,245	2,281	2,331	1,547	2,219
Totals	2,817	2,673	2,470	1,909	2,418

Hospitals, Native Dispensaries and Asylums (Expenditure).

	1927	1926	1925	1924	1923
	£	£	£	£	£
Salaries	25,198	23,890	21,533	15,962	16,350
Travelling expenses on appointment, duty or leave, rail and port charges ...	1,389	1,645	1,255	1,440	855
Provisions and medical comforts (including "Produce," etc., 1927)	21,260	7,754	6,596	6,566	6,302
Fuel, light and water	4,869	4,480	3,971	2,892	2,856
Furniture, equipment, repairs and clothing	9,396	6,975	4,325	3,664	3,704
Drugs, disinfectants and surgical appliances	7,362	6,792	7,005	4,426	3,683
Laundry	2,214	1,558	1,446	1,130	1,040
Sanitary fees	608	566	508	455	482
Produce, etc.	—*	11,446	11,181	7,764	8,101
Miscellaneous	656	868	473	387	514
Grants-in-aid to hostels, hospitals and district nursing	2,269	1,992	2,959	6,347	5,636
Totals	75,221	67,966	61,252	51,033	49,523

* Now included under "Provisions and Medical Comforts."

Hospitals, Native Dispensaries and Asylums (Revenue).

	1927	1926	1925	1924	1923
	£	£	£	£	£
Fees collected from paying patients ...	27,166	25,847	21,251	13,326	15,055

Expenditure on Government Hospitals, including Ingutsheni Mental Hospital, during 1927 amounted to £67,338 gross, as compared with £61,856 during the previous year, £56,537 in 1925, £43,810 in 1924 and £43,229 in 1923, an increase of £24,109 in the last five years. The revenue collected amounted to £27,277, as against £25,847 collected in 1926, £21,251 in 1925, £13,326 in 1924 and £15,055 in 1923, an increase during the last five years of £12,222.

The gross earnings from paying patients amounted to £34,716, as compared with £31,033 for the previous year, an increase of £3,683; while the total number of patients maintained was 10,378, as compared with 9,508 for the previous year, an increase of 870.

In addition to the earnings from paying patients, the loss of revenue represented by the free treatment of paupers, police, gaol officials and others who were entitled to free medical attendance in Government Hospitals, and for the cost of whom no inter-departmental charges are made, amounted to £15,022, and if Ingutsheni Mental Hospital be included, this figure is increased to £26,244, as compared with £23,811 in 1926, £21,475 in 1925, £19,142 in 1924 and £16,141 in 1923.

Returns showing the number of beds, the daily average of patients treated, the revenue and expenditure, the average cost per patient per diem, the number of free patients, the number of units treated, the cost to Hospital Votes of treatment and maintenance on the basis of the gross expenditure, and the loss of revenue represented thereby at the various institutions will be found in Part III.

CHAPTER II.—WORK OF THE DEPARTMENT.

(1) **Public Health Laboratory.**—The Public Health Laboratory has been strengthened by the addition of a Chemist, who also acts as Public Analyst under the Foods and Drugs Act. The reports of the Director, and the various divisions of the laboratory, both research and clinical, are printed in the appendix to this report.

The Bacteriologist's report, which reviews the works of the year, demonstrates the increase in the routine work of the laboratory, an increase which has been more or less consistent every year, since the laboratory started in its humble position in a small room attached to the Medical Director's office, and is indicative not only of the growth of the Colony, but also of the assistance which this institution is proving to the general practitioner in the diagnosis and treatment of disease.

Apart from the routine work, investigations have been continued into the evidence of latent syphilis and yaws in natives, the prevalence of bilharzia infection in school children, and hookworm disease in natives.

Dr. Ross, the Research Fellow from the London School of Hygiene and Tropical Medicine, and Mr. Leeson, the Research Entomologist, have continued their researches into the causes of blackwater fever; Dr. Ross also finding time to continue researches into undulant fever and its relations to contagious abortion in cattle.

The results obtained by the Research Entomologist in his studies of the seasonal spread of *anopheles costalis* in relation to the incidence of malaria and blackwater fever are of particular interest and importance.

(2) **Medical Inspection of Schools.**—The report of the Medical Inspector of Schools does not call for as much comment as in previous years, though doubtless it will be read by those concerned with the interest that it deserves.

The health of the school child is of paramount importance in all countries, and nowhere more than in this, and the Medical Inspector of Schools is on the whole encouraging when he discusses the physical condition of the age groups examined by him in the year under review.

It must be admitted, however, that the average of slight illnesses is high, especially in the large schools in urban areas, and whether this is due to conditions arising from school life, or is traceable to previous home conditions, is a moot point, and one which should engage the particular attention of school medical officers.

Outbreaks of infectious diseases are also becoming unduly prevalent in some of the large educational centres, and hardly a term now passes without an outbreak of one infectious disease or another, in one or other of the schools or boarding houses; and though no epidemic of any importance has occurred to date, this has been due primarily to the prompt handling of the outbreaks, with consequent rapid disappearance of the disease in every case. The overcrowding of school boarding houses beyond their capacity, on account of the numbers presenting being in excess of the accommodation available, should on this account alone be forbidden at all times, as even in the absence of infectious disease this close herding of children together in a climate such as this cannot but lead to an increase in colds, sore throats, and many of the minor invalidisms.

(3) **Compound Inspectors' Reports and Health on Mines.**—The Inspectors of Mine Native Compounds report that the health of the natives employed on mines has been satisfactory and that no undue sickness and serious epidemics have occurred anywhere. They report generally that the conditions under which natives are working, especially on the larger mines, are improving yearly as regards housing, feeding, clothing and recreations. It is not only that the mine owners are recognising that in order to maintain their labour they must offer more inducements to the labourer, but also the native labourer himself as he becomes more educated is demanding more, and is not satisfied if he does not get it.

The number of employers continues to decrease, though the average number of natives employed on mines throughout the year is approximately the same as in 1926.

The sickness and death rates are also approximately the same, a similarity which at first raised doubts as to their probable accuracy. Excluding minor accidents and ailments, of approximately 15,000 cases of illness remaining, two-thirds are due to three causes, namely, pneumonia and other respiratory diseases, influenza and malaria. Of these, the deaths from malaria numbered 30, from influenza 18, and from pneumonia and diseases of the chest 333.

There were 99 cases of tuberculosis of the lungs reported, as compared with 100 in 1926.

Health on Mines.—The numbers of employers rendering labour returns at the 31st December were as follows:—

	1925.	1926.	1927.
Mashonaland	156	138	112
Matabeleland	186	172	169

The sizes of properties at the 31st December, 1927, are indicated by the following table:—

Mines employing 2,000 natives and over	2
,, ,, 1,500 ,, ,,	3
,, ,, 1,000 ,, ,,	5
,, ,, 500 ,, ,,	5
,, ,, 400 ,, ,,	2
,, ,, 300 ,, ,,	4
,, ,, 200 ,, ,,	13
,, ,, 100 ,, ,,	37
,, ,, 50 ,, ,,	61
,, ,, 25 ,, ,,	61
,, ,, under 25 natives	88

The following table shows the number of cases of sickness, number of deaths, case mortality per cent., sickness incidence per 1,000 per annum employed, and death rate per 1,000 per annum, amongst natives employed on mines in Southern Rhodesia during the year 1927:—

Monthly Average Number Employed, 41,635.

Disease.	Total sick.	Sickness incidence per mille per annum employed.	Total deaths.	Case mortality per cent.	Death rate per mille per annum employed.
Malaria	3,587	86.16	30	.84	.72
Scurvy	160	3.84	4	2.50	.10
Syphilis	470	11.29	5	1.06	.12
Pneumonia	1,698	40.78	313	18.43	7.52
Phthisis	99	2.38	44	44.44	1.06
Other diseases of the chest ..	1,698	40.79	20	1.18	.48
Dysentery	154	3.70	16	10.39	.38
Diarrhœa	416	9.99	1	.24	.02
Other intestinal diseases ...	132	3.17	30	22.73	.72
Heart disease	42	1.01	24	57.14	.58
Debility	295	7.08	9	3.05	.22
Influenza	3,111	74.71	18	.58	.43
Other diseases	2,705	64.97	81	2.99	1.95
Minor ailments	8,980	215.68	—	—	—
Accidents, major	244	5.86	94	38.52	2.26
,, minor	9,887	237.48	—	—	—
Totals	33,678	808.89	689	2.05	16.55

SOUTHERN RHODESIA.

MORTALITY ON MINES.

Annual Territorial Summary showing Mortality amongst Native Labourers for the Year ended 31st December, 1927.

Territorial classification.	Average number employed.	DEATHS.															Death rate per mille per annum.					
		Malaria.	Scurvy.	Syphilis.	Pneumonia.	Phthisis.	Other diseases of the chest.	Dysentery.	Diarrhœa.	Other intestinal diseases.	Heart disease	Debility.	Influenza.	Other diseases.	Accidents.	Totals.	Disease.		Accidents.		All causes.	
																	1927.	1926.	1927.	1926.	1927.	1926.
Southern Rhodesia	12,062	2	...	1	60	4	3	4	...	3	6	...	1	12	23	119	7.96	8.65	1.91	2.27	9.87	10.92
Port. East Africa ...	3,704	2	...	...	22	6	3	1	1	3	3	1	3	11	9	65	15.12	16.10	2.43	1.06	17.55	17.16
Northern Rhodesia	12,422	17	2	1	105	18	10	4	...	12	4	2	3	31	25	234	16.82	15.60	2.01	1.84	18.84	17.44
Nyasaland ...	13,321	9	2	3	118	13	4	7	...	12	11	5	10	25	37	256	16.44	17.64	2.78	2.70	19.22	20.34
Other sources ...	537	...	...	...	8	3	...	...	...	...	...	1	1	2	...	15	27.93	1.66	...	1.66	27.93	3.32
Totals ...	42,046	30	4	5	313	44	20	16	1	30	24	9	18	81	94	689	14.15	14.22	2.24	2.16	16.39	16.38

NOTE.—The figure 42,046 is the average of the number of natives actually employed at the end of each month, not of the daily average.

Comparative Statement of Mortality amongst Natives Employed on Mines in Southern Rhodesia, January to December, 1927.

Month.	Average No. of natives employed.	No. of deaths from disease.	Death rate per 1,000 per mensem from disease.	No. of deaths from accident.	Death rate per 1,000 per mensem from accident.	Total No. of deaths.	Death rate per 1,000 per mensem from all causes.
January ...	39,067	38	1.00	17	.41	55	1.41
February ...	38 586	36	.93	11	.29	47	1.22
March ...	39,961	43	1.08	4	.10	47	1.18
April ...	40,920	39	.95	6	.15	45	1.10
May ...	40,926	35	.85	4	.10	39	.95
June ...	40,104	31	.77	5	.12	36	.90
July ...	40,626	39	.96	3	.07	42	1.03
August ...	41,983	57	1.36	6	.14	63	1.50
September...	40,858	74	1.81	10	.24	84	2.05
October ...	41,138	82	1.99	9	.22	91	2.21
November...	39,258	53	1.35	3	.08	56	1.43
December ...	39,527	53	1.34	14	.35	67	1.69

Totals and Averages, including late Returns.

Year.			Per annum.		Per annum.		Per annum.
1927 ...	41,635	595	14.29	94	2.31	689	16.55
1926 ...	41,671	598	14 35	91	2.18	689	16.53
1925 ...	39,386	505	12.82	105	2.67	610	15.49
1924 ...	41,286	665	16.11	89	2.16	754	18.26
1923 ...	37,482	504	13.44	105	2.80	609	16.25
1922 ...	35,718	681	19.07	86	2.40	767	21.47
1921 ...	37,605	689	18.30	94	2.50	783	20.82
1920 ...	37,669	599	15.90	75	1 99	674	17.90
1919 ...	30,296	507	16.73	90	2.97	597	19.71
1918 ...	32,766	3,629	110.76	88	2.69	3,717	113.44
1917 ...	38,861	700	18.01	149	3.83	849	21 85
1916 ...	40,420	911	22.48	172	4.24	1,083	26.73
1915 ...	37,928	832	21.94	159	4.19	991	26.13
1914 ...	36,100	897	24.85	135	3.74	1,032	28.39
1913 ...	33,543	783	23.49	158	4.71	946	28.20
1912 ...	34,494	1,073	31.11	163	4 73	1,236	35.83
1911 ...	37,909	1,085	28.62	164	4.33	1,249	32.95
1910 ...	37,826	1,682	44.64	182	4.81	1,864	49.28
1909 ..	32,721	1,383	41.27	161	4.92	1,544	47.19
1908 ...	30,865	1,397	45.26	132	4.28	1,529	49.54
1907 ...	26,098	1,486	56.94	102	3.91	1,588	60.85

(4) **Public Health Legislation.**—(a) *Medical, Dental and Pharmacy Act.*—The new Act was duly passed by the Legislative Assembly during the year under review. It supersedes the obsolete Act dated 1830, of the Cape of Good Hope. under which we have been obliged to work in the past.

(b) *Medical Committee.*—During the past year the Medical Committee appointed under the Medical Act, 1830, referred to above, met four times.

During 1927 the admissions to practise approved by the Medical Committee were :—

Medical practitioners	9, as compared with 7 in 1926
Dentists	3, as compared with 7 in 1926
Chemists	3, as compared with 8 in 1926

(c) *Public Health Act,* 1926.—No further regulations under the Public Health Act have been promulgated during the year.

(d) *Habit-Forming Drugs Legislation.*—No alteration in the existing regulations was introduced during the year.

Import certificates issued during the year numbered 51, as against 45 in 1926. Export certificates numbered 12, as against 11 in the previous year.

Permits were issued to import the following habit-forming drugs in the following quantities:—

Cocaine alkaloid	1.93 ounces
Cocaine hydrochloride	12.43 ounces
Heroin hyrochloride	300.00 grains
Morphine alkaloid	44.17 ounces
Morphine hydrochloride	20.37 ounces
Morphine sulphate	13.90 ounces
Morphine tartrate	1.00 ounces
Opium	34.00 ounces

The export permits issued were for the following quantities:—

Cocaine alkaloid	10 grains
Cocaine hydrochloride	208 grains
Liquor opii sedative	20 ounces
Morphine alkaloid	259 grains
Morphine hydrochloride	438 grains
Morphine sulphate	45 grains
Tincture of opium	22 ounces

Permits issued by the Veterinary Department under the provisions of Government Notice No. 368 of the 27th June, 1924, numbered 20 for 835 ounces of tincture of opium. This large increase was due to heavy demands from the Rhodesian Exploring Company and Liebig's Ranches for supplies to their different stations.

REPORT ON MEDICAL EXAMINATION OF NATIVES IN BULAWAYO FOR THE YEAR ENDED 31st DECEMBER, 1927.

Number of medical examinations	6,177
Number of vaccinations performed	1,849

Representing 299.4 per thousand of total examined.

		Case incidence per thousand examined.
Venereal Disease	49	7.93

Percentage—.8 per cent.

Other Infectious or Contagious Diseases.

Chicken-pox	62	10.04
Mumps	3	.49
Measles	4	.65
Scabies	3	.49
	72	11.66

Native Venereal Hospital.

	From municipal area. Males.	From municipal area. Females.	From country districts. Males.	From country districts. Females.
Admissions	212	48	62	30
Total admissions			352	

Of total admissions, 113 were Railway and other employees.

Number of cases voluntarily seeking admission, 214.

SALISBURY MUNICIPALITY.

Return of Examination of Natives for the Year 1927. *Treated in Lazaretto.*

Disease.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Total.
Syphilis	30	18	29	25	38	40	25	23	31	27	38	28	352
Syphilis and Gonorrhœa	1	...	1	...	...	...	...	...	...	2	...	...	4
Syphilis of Anus	...	...	...	...	...	...	...	...	...	...	...	2	2
Congenital Syphilis	...	...	...	...	...	...	...	...	...	2	...	...	2
Syphilis and Phimosis	...	...	...	...	...	...	...	1	1	1	...	1	4
Syphilis, Gonorrhœa and Phimosis	...	...	...	...	...	...	...	...	...	...	...	1	1
Gonorrhœa	5	1	3	4	6	4	6	2	12	9	2	7	61
Gonorrhœa and Phimosis	...	...	...	2	...	...	...	...	2	1	...	...	5
Gonorrhœa Warts on Anus	...	...	...	2	...	...	1	2	3	...	...	...	8
Gonorrhœa and Orchitis	...	1	...	...	...	1	1	1	...	1	...	1	6
Gonorrhœa and Adenitis	...	...	...	...	...	...	...	...	...	...	...	1	1
Gonorrhœa and Bubo	...	...	...	...	...	...	...	...	...	...	...	1	1
Suspects	...	...	...	...	...	...	...	...	...	...	...	2	2
Itch	3	3	4	11	8	5	2	1	10	6	1	3	57
Measles	2	...	...	...	...	1	2	...	2	1	...	2	10
Filth	1	...	1	1	...	...	...	...	...	...	...	2	5
Chicken-pox	...	2	...	...	6	6	5	10	8	7	9	5	58
Mumps	...	...	1	...	...	...	...	1	...	...	...	1	3
Rash	...	...	1	...	...	...	...	...	...	..	1	...	2
Ringworm	...	...	1	1	...	...	...	...	...	...	...	...	2
Observation	...	...	1	...	...	...	...	...	1	...	...	...	2
Septic Phimosis	...	...	...	...	...	1	...	1	...	...	1	...	3

The above number of natives were from the municipal area from a total of 10,227 natives examined.

CHAPTER III.—VITAL STATISTICS.

Population.—The mean population—European, Asiatic and Coloured—as at the 30th June, 1927, is estimated by the Government Statistician as follows:—

	Persons.
European	41,624
Asiatic	1,505
Coloured	2,201
	45,330

The estimate indicates an increase in the European population since the date of the last Census (4th May, 1926) of 2,450 persons, and includes additions to the European population—

(a) in respect of natural increase (excess of births over deaths) amounting to 739; and

(b) in respect of *net* immigration amounting to 1,711.

European Births.—The European births registered during the past year numbered 1,013 (504 males and 509 females), as compared with 939 (560 males and 379 females) in 1926.

Of the 1,013 births registered, 27 (13 males and 14 females) were illegitimate.

The crude birth rate in 1927 per 1,000 of the mean population was 24.3, compared with 23.8 in 1926. Omitting illegitimate births, it is estimated that the legitimate birth rate per 1,000 married women between 15 and 45 years of age was 181.2 in 1927, as against 177.3 in 1926.

The following Empire comparisons may be of interest:—

Country, province or state.	Year.	Crude birth rate per 1,000 of total population.	Year.	Legitimate birth rate per 1,000 married women of 15 to 45 years of age.
Quebec	1926	32.1	1924	307.8
New Brunswick ...	1926	25.3	1924	224.8
Union of South Africa ...	1626	26.2	1921	219.3
New South Wales ...	1926	22.9	1920-22	193.9
Southern Rhodesia ...	1925 1926 1927	23.0 23.8 24.3	1925 1926 1927	168.4 177.3 181.2
Queensland	1926	22.6	1920-22	212.6
Ontario	1926	21.5	1924	176.3
Western Australia ...	1926	22.1	1920-22	196.2
Scotland	1925	21.3	1925	190.0
New Zealand ...	1926	21.1	1921	181.6
Alberta	1926	23.8	1924	158.5
England and Wales ...	1926	17.8	1926	139.8

It will be seen that Southern Rhodesia occupies a not unfavourable position in the middle of the above table.

Asiatic and Coloured Births.—In addition to the foregoing, the following non-European births were recorded by the Registrar during the year:—

Asiatics, 64; Coloured, 34; Native, 2.
Total, 100.

Of these, 3 Asiatics, 1 Coloured and 1 Native were plural births, and 12 were illegitimate.

European Deaths.—The deaths among Europeans registered during the year numbered 377, as compared with 348 in 1926.

Calculated on the estimated mean population in 1927, the crude death rate was 9.1 per 1,000 of total population. The corresponding rate in 1926 was 8.8. The number of deaths of male Europeans was 258 in 1927, as compared with 228 in the previous year, an increase of 30 deaths. At 119, deaths of female Europeans were 1 less than in 1926.

The number of deaths of infants under 1 year of age registered during the past year was 48, or 2 more than in the previous year, the infantile death rate per 1,000 births being 47, as compared with 48 in the previous year.

At other ages the most notable features of the return are among males the increased number of deaths of 25-35 years of age and 45-55 years of age; among females the smaller number of deaths in all age groups between 1-5 and 25-35, and for both males and females the increased number of deaths among persons aged 65 years and upwards.

When it is said that the crude death rate for the whole population is 9.1 per 1,000 of the total population, it must not be overlooked that it conceals much respecting the relative specific death rates at various age periods.

As illustrating this, the following table may prove interesting:—

EUROPEAN POPULATION.

Specific Death Rates per 1,000 at Each Age-Period, 1927.

Males and Females Separately.

Age-period.	Males.	Females.	Persons.
0-1	75.00	35.63	55.75
1-5	7.98	5.43	6.77
5-15	3.19	1.49	2.38
15-25	5.07	1.26	3.33
25-35	7.82	2.91	5.54
35-45	6.12	6.60	6.34
45-55	13.11	8.11	11.28
55-65	21.89	20.83	21.53
65-75	54.32	52.82	55.05
75-85 and over	149.53	93.33	126.37
All ages	11.13	6.45	9.06

It thus appears that the " safest " age-periods are for males, 5-15, and for females, 15-25.

The high rate for males in the 25-35 age-period is very striking.

For age-period 35-45 the rate for males is more favourable than for females.

For all other age-periods the advantage lies with females.

CAUSES OF DEATH IN CHILDREN UNDER ONE YEAR OF AGE.

	1922.	1923.	1924	1925.	1926.	1927.
Malaria	—	11	3	5	—	4
Blackwater	1	1	—	—	—	—
Measles	—	—	—	1	—	—
Whooping-cough	1	1	5	1	2	—
Diphtheria and croup	—	—	—	1	1	—
Influenza	1	6	2	4	—	1
Purulent infection and septicæmia	—	—	—	1	—	—
Tuberculosis of the lungs	—	—	—	1	—	—
Convulsions of infants	5	6	1	6	2	3
Acute bronchitis	1	3	3	3	—	1
Broncho-pneumonia	3	—	2	3	1	7
Pneumonia	5	6	7	6	4	—
Diarrhœa and enteritis	4	7	7	5	6	2
Hernia: intestinal obstruction	1	1	1	1	2	1
Diseases of the intestines	—	—	—	1	1	—
Other diseases of the liver	—	—	—	1	—	—
Congenital malformations	1	2	1	1	1	2
Congenital debility, icterus and sclerema	20	20	26	21	18	11
Other diseases peculiar to early infancy	3	1	—	2	—	2
Burns, conflagration excepted	—	—	—	1	—	1
Absorption of deleterious gases	—	—	—	1	—	—
Cause of death not specified or ill-defined	3	2	—	2	3	1
Dysentery	1	2	1	—	—	2
Other general diseases	1	—	2	—	1	—
Simple meningitis	2	—	2	—	1	—
Diseases of the larynx	—	1	—	—	1	—
Acute abscess	1	—	—	—	—	—
Other diseases of the skin and annexa	—	1	—	—	1	—
Cerebro-spinal fever	—	—	1	—	—	1
Gangrene	—	—	1	—	—	—
Diseases of the ears	—	—	—	—	1	—
Syphilis	—	—	—	—	—	1
Cerebral hæmorrhage	—	—	—	—	—	1
Other diseases of the nervous system	—	—	—	—	—	2
Organic diseases of the heart	—	—	—	—	—	3
Simple peritonitis (non-puerperal)	—	—	—	—	—	1
Asthma	—	—	—	—	—	1
Totals	54	71	65	68	46	48

VITAL STATISTICS—NATIVES.

No reliable returns of births and deaths are yet available from the native population, and consequently no statistics can be given as to birth and death rates amongst them. A limited Census of the native population in certain selected districts is now, however, under contemplation, with the introduction of compulsory registration of native births and deaths within these areas. When this has become effective, it will be possible to get some idea of the approximate birth and death rates amongst natives living in reserves, about which at present we are very ignorant. The infantile death rate, which in native kraals is popularly supposed to be extremely high, and is a subject of the wildest speculation, will then be properly ascertained, and if unduly high the causes of such will be sought out, and if possible remedied.

CHAPTER IV.—PUBLIC HEALTH.

Infectious, Communicable and Preventable Diseases.

Notifiable Diseases.—The following is a summary of the infectious disease notifications during 1927, as compared with the previous year:—

Disease.	1926. Number of Cases.		1927. Number of Cases.	
	European.	Native.	European.	Native.
Chicken-pox	114	257	185	461
Small-pox	...	1	...	6
Scarlet fever	11	...	16	...
Scarlatina	1		1	...
Measles	151	231	16	95
German measles	9	...	76	9
Whooping cough	3	...	8	3
Mumps	7	16	4	11
Influenza	69	485	48	189
Kaffir-pox	...	...	..	42
Typhoid fever	28	16	35	15
Para-typhoid fever	7	...	3	1
Diphtheria	10	1	7	1
Undulant fever	8	2	7	1
Cerebro-spinal meningitis ...	...	3	3	18
Meningitis	...	...	...	3
Encephalitis lethargica	...	3	...	2
Erysipelas	3	..	2	...
Ringworm	1	..	11	...
Septic throat	...	...	1	...
Scabies	..	...	...	1
Infective ophthalmia	...	...	5	...
Bilharzia	...	...	1	...
Anthrax	...	1	.	1
Trypanosomiasis	...	2	..	1
Totals	422	1,018	429	860

The notifications of infectious diseases remained fairly consistent, being if anything slightly decreased from the previous year.

Chicken-pox, both amongst Europeans and natives, showed a considerable increase, and the manner in which the rise in the incidence of this disease so frequently coincides with an outbreak of small-pox leads one to believe that in some places and under some conditions a confusion in diagnosis may exist.

Scarlet fever and German measles show an increase, and were largely confined to children of school age in Salisbury and district.

Cerebro-spinal meningitis was increased, but nowhere did it become in any sense epidemic.

Small-pox and Vaccinations.—After several years of comparative immunity, no deaths since 1923 having been reported till this year, small-pox again appeared in the Colony, but so far only in one or two of the northern districts, and then only in a sporadic form. Altogether, 10 cases occurred between August and December of 1927, with one death; all of which were in the vicinity of the Bulawayo-Victoria Falls railway line, and spreading from there to the Inyati district north of Bulawayo, the origin of the outbreak being traceable to Northern Rhodesia, where an epidemic has existed for some time.

The vaccination of the native population has been continued steadily for many years, but latterly in insufficient numbers to keep pace with the increase of population, and Native Commissioners from several districts have reported that the numbers of unvaccinated natives in their districts were increasing. In view of this, and of the risk of introduction of small-pox from beyond our borders, a speeding up of the vaccination of natives, especially in some districts, had been decided upon, and altogether 214,685 vaccinations were performed during the year, of which 232 were European and the remainder native. Of the native vaccinations, 22,425 were amongst the natives resident in towns and villages, or on mines, whilst 192,028 were performed by officials of the Native Department in native areas, or at ports of entry.

The danger of any extensive epidemic of small-pox occurring is remote, but sporadic cases and limited outbreaks are probable, especially in those parts of the country liable to invasion from other territories, or where vaccination of the unvaccinated population has not yet been completed.

Enteric Fever.—There were 45 admissions on account of enteric fever to general hospitals throughout the country, of which 29 were Europeans and 16 natives. The mortality was high, especially in the native cases. Out of a total of 12 deaths, 10 were natives.

There has been no epidemic or outbreak in any particular place, or amongst any particular section of the community, the disease being sporadic, and the cases scattered over the country generally. The larger number of cases were admitted to Salisbury and Bulawayo hospitals, most of these, however, coming from outside districts.

The following are admissions to general hospitals for the last five years:—

Year.	Cases
1923	61
1924	42
1925	24
1926	50
1927	45

Undulant Fever.—There has been a marked decrease in the number of cases of undulant fever reported during the year, the following being the admissions to general hospitals on account of this disease for the last five years:—

Year.	Cases.
1923	12
1924	16
1925	9
1926	11
1927	7
	55

The Surgeon-in-Charge of the Salisbury Hospital reports favourably on the results of certain lines of treatment which have been the subject of trial there, but records that an insufficient number of cases has so far been available to issue any definite statement.

Malaria.—At one time nearly one-half of the total admissions to general hospitals in the country were traceable to malaria and its sequelæ, whilst to-day those admissions amount to a little more than one-eighth.

The following table shows the admission rate per 1,000 of the estimated population for the last six years, compared with the average rainfall:—

Year.	Admissions to hospitals.	Admission rate per 1,000 of the population.	Deaths registered.	Rainfall.	
				Season.	Average.
1922	500	14.35	14	21.22	16.11
1923	953	26.32	49	22.23	39.16
1924	413	11.11	13	23.24	16.69
1925	765	19.68	21	50.03	40.42
1926	614	15.67	14	35.76	35.42
1927	545	13.09	15	20.55	21.81

The incidence in 1927 was low in comparison, and no epidemics or unusual numbers of cases were reported from any one district.

The new settlers taking up hitherto unoccupied land, especially in some of the more unhealthy districts, suffered severely in some instances, and to them must be added that host of traders, squatters, prospectors and others who, in spite of years of experience, cannot yet learn, or possibly have not the means or intelligence, to adopt the simplest of preventative measures.

An arrangement has now been entered into with the Lands Department, whereby all new settlers, as soon as they take up land, are visited by the nearest Government Medical Officer, who warns them as to the dangers they may incur, and the precautions to be taken; and at the same time reports fully to the Government on the conditions under which he finds the settler is living, the salubrity of his surroundings, and his prospects of preserving his health and avoiding malaria. This has already done much good, and has been universally appreciated.

The mosquito survey at the lower end of the Shamva Valley, which was mentioned in the 1926 report, has produced some interesting data, which are referred to in the report of the Research Entomologist.

The investigations into the relative merits of certain anti-malarial remedies have been continued at the Public Health Laboratory, and are explained in the reports of the Director and the Research Fellow respectively, to which reference can be made.

Government Quinine.—The policy of the distribution of quinine at a little over wholesale price through Post Offices and Government stations has been continued, and is much appreciated by the public in rural areas.

The sales for the year amounted to 13,067 bottles of 100 5-grain tablets. The price at which this quinine was sold to the public throughout the year was 3s. 6d. per bottle.

Blackwater Fever.—Dr. Ross's investigations on behalf of the London School of Tropical Medicine have been continued, and his results to date are given in his report, which is attached.

The incidence of the disease shows little numerical change, though in relation to the rural population it is undoubtedly decreasing, the total number of cases reported being 36.

The mortality remains much the same as before, and no specific remedy or line of treatment, short of avoidance of malaria, has yet been discovered, though nostrums of all sorts still find their advocates, and are still exploited both in the Press and by advertisement.

The following table gives the number of admissions to general hospitals and the death rate per cent. for the last 14 years:—

Year.	Number of cases of blackwater admitted to hospital.	Number of deaths in hospital.	Mortality rate per cent.
1914	53	13	24.53
1915	62	16	25.81
1916	35	6	17.14
1917	48	13	27.08
1918	36	11	30.56
1919	37	7	18.92
1920	75	10	13.33
1921	53	6	11.32
1922	49	14	28.57
1923	64	14	21.88
1924	20	1	5.00
1925	51	13	25.49
1926	36	11	30.56
1927	36	13	36.11
	655	148	22.60

Pneumonia and Diseases of the Respiratory Organs.—The incidence and mortality rates from pneumonia and other diseases of the chest vary somewhat from year to year, as is to be expected, but unfortunately cannot be said to be showing any abatement in the aggregate. This is by far the most important of all the diseases affecting the native labourer in employment, and also is a serious factor in the health of those Europeans who are resident in the larger towns, or who work on mines, and especially amongst those employed in tobacco grading factories. This latter industry, which has grown to such large proportions in the last two years, has been instrumental in increasing the incidence rate of pneumonia and broncho-pneumonia in the country generally, an increase which is applicable both to whites and blacks.

The following table gives the admission rates for pneumonia, broncho-pneumonia and bronchitis to hospitals, with the mortality per cent. of admissions, for the last five years: —

	PNEUMONIA.				BRONCHO-PNEUMONIA.				BRONCHITIS.			
	Europeans.		Natives.		Europeans.		Natives.		Europeans.		Natives.	
	Admissions.	Deaths.	Admissions.	Deaths.	Admissions.	Deaths.	Admissions.	Deaths.	Admissions	Deaths.	Admissions.	Deaths.
1923 ...	43	5	196	69	3	...	2	...	37	3	56	...
1924 ...	69	16	381	117	12	3	25	4	47	...	48	7
1925 ...	64	16	379	99	6	3	8	...	66	4	115	3
1926 ...	82	18	898	296	5	1	12	3	70	4	91	5
1927 ...	90	9	796	240	9	1	16	3	74	3	119	3
	348	64	2,650	831	35	8	63	10	294	14	429	18

The mortality rate shows little variation, and approximates to 12.7 per cent. amongst Europeans and 27.02 per cent. amongst natives.

After some years of trial, it must be admitted that the results of preventative inoculation with Lister's 8-strain vaccine has not afforded the results anticipated, and it is presumed that new strains are constantly appearing and acquiring pathogenic virulence, following on epidemics of catarrhs and influenzas.

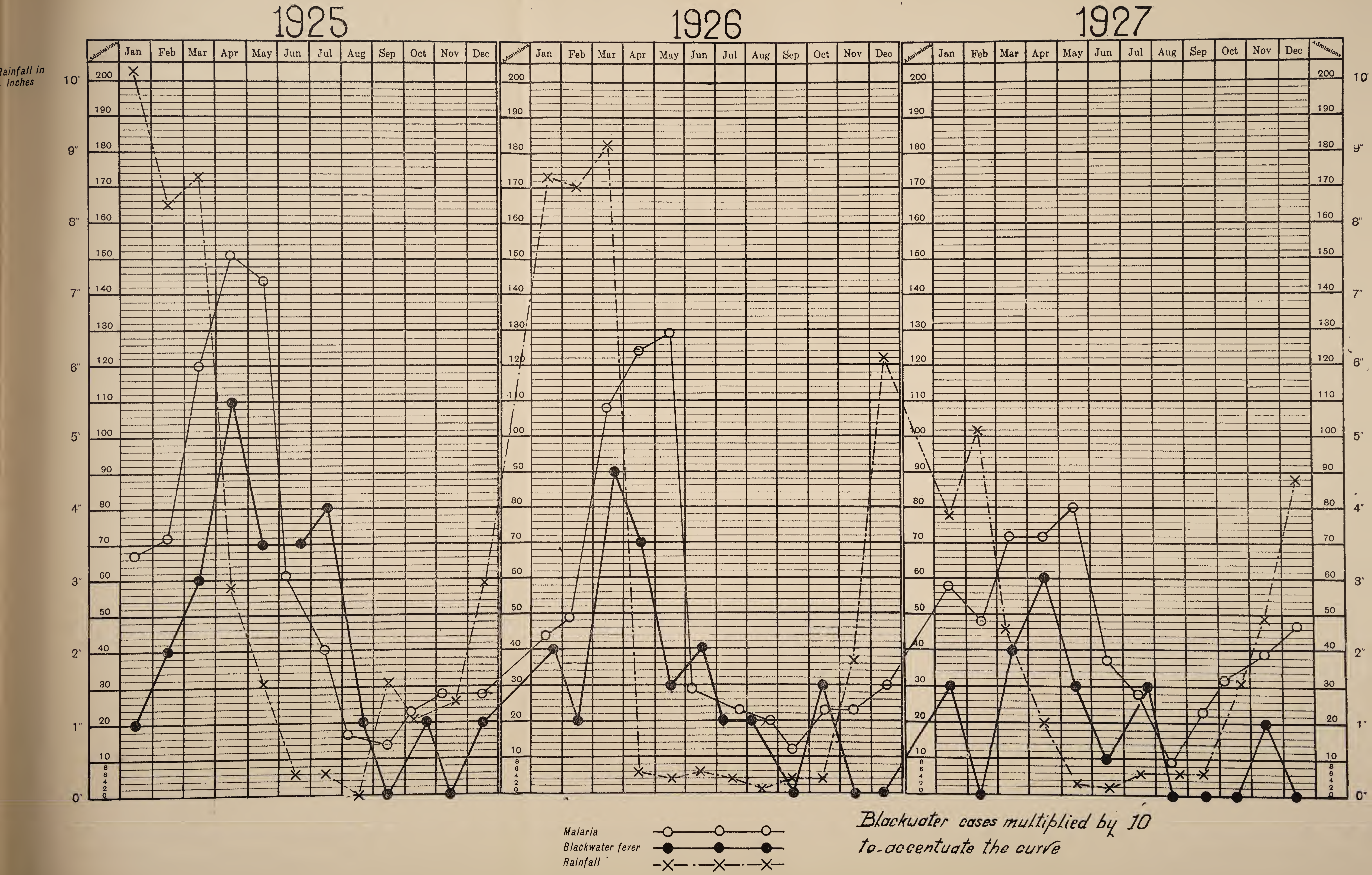
Tuberculosis.—There is an increase in the European cases of phthisis applying for hospital treatment, and a slight decrease in the native, the admissions to hospital for the last two years being: —

	1926.		1927.	
	Admissions.	Deaths.	Admissions.	Deaths.
Europeans	34	10	49	15
Natives	141	86	135	78
	175	96	184	93

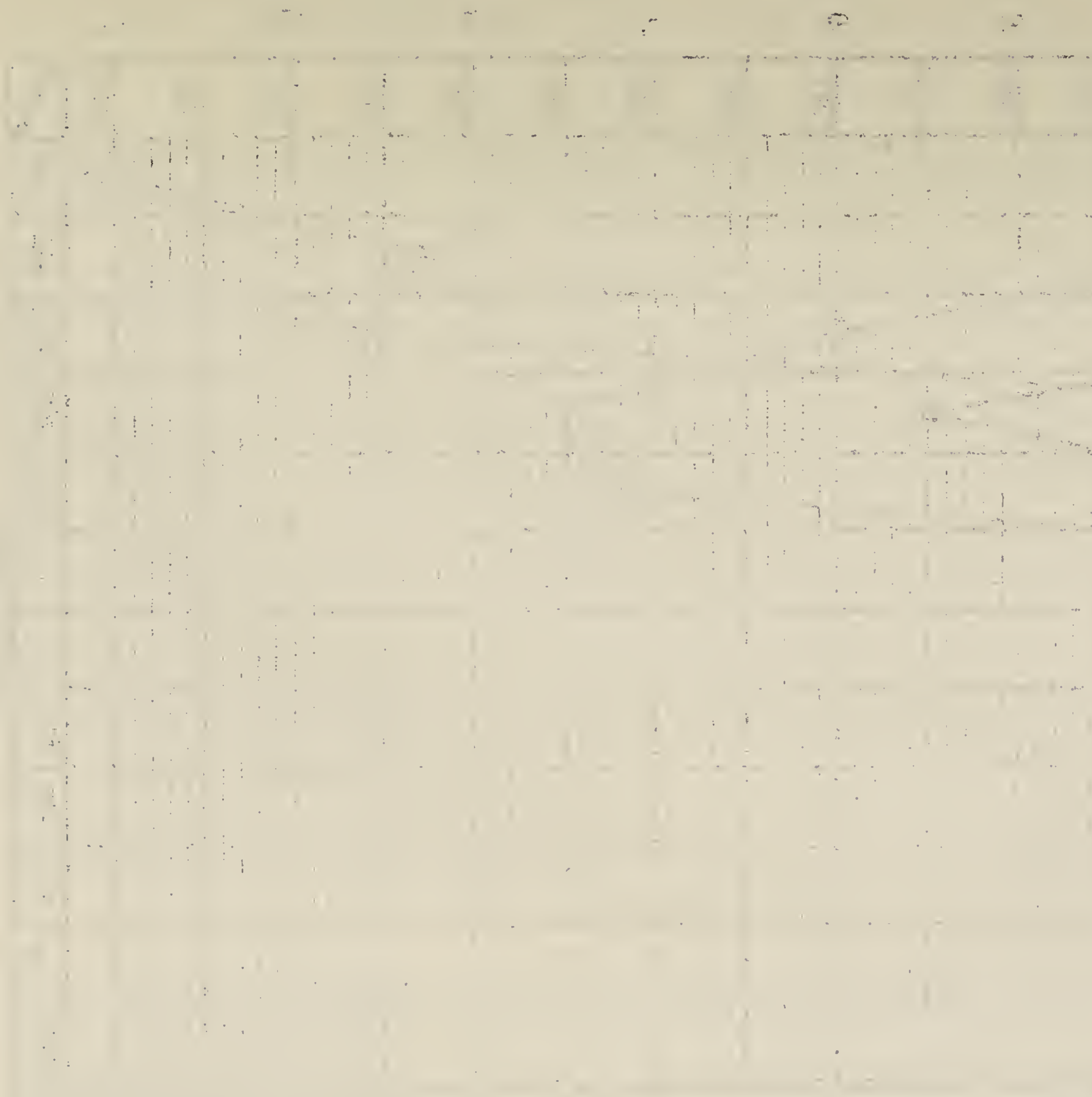
The influx of settlers has been followed by an increase in the cases of phthisis reported, or seeking admission to hospitals for relief, for though the immigration laws forbid the entry into the Colony of persons suffering from tuberculosis of the lung in an active form, yet these regulations are often difficult to enforce, and no doubt a number of cases escape detection. One or two have been discovered shortly after their arrival, and have in those instances been returned to their country of origin.

An impression seems to have gone abroad that the climate of Southern Rhodesia is eminently suited for the treatment of tuberculosis of the lung, irrespective of the type of the disease, and whether it is in an early, or an advanced, or a latent and chronic stage, and the ignorance displayed by some medical men in advising their patients to try the climate of Southern Rhodesia as being certain

CHART SHEWING NUMBER OF CASES OF MALARIA, PNEUMONIA, AND BLACKWATER FEVER, WITH RAINFALL IN RHODESIA



Blackwater cases multiplied by 10 to accentuate the curve



to effect a rapid and permanent cure, without any regard to the condition of the patient, or any knowledge of what they were coming to, is both inhuman and criminal.

Reviewed in all its aspects, it cannot be said that this Colony holds out any special advantages to the phthisical, except in the very early stages of the disease, and on the other hand it has many drawbacks, in that the towns are too dusty, the lower altitudes are too hot, with the added risk of malarial infection; whilst in the rural areas of the more salubrious highlands, the conditions of life are still too primitive to afford the necessary comforts associated with chronic invalidism; and no official or private encouragement should be given to persons suffering from phthisis to emigrate to this country with high hopes of a cure and a future of health and happiness, for in the vast majority of cases the awakening can only be bitter, and the end despair.

At present these cases are admitted when necessary to general hospitals, and are nursed on verandahs, or in open-air wards, where these exist, but the accommodation, especially in some of our hospitals, is already encroaching on the requirements of general cases, and the time is approaching when a special sanatorium will be required for the partial segregation and proper treatment of this disease on the most modern lines.

The reports by the Surgeon-in-Charge on the results of the modified sanatorium treatment which is practised at Salisbury are on the whole disappointing.

Leprosy.—Both the administration of the Settlement and the health of the lepers have benefited from the removal of the Settlement from Morgenster to Gomohuru.

A house for the Superintendent and a central hospital have now been completed, with a spacious shed fitted with a boiler and hot and cold water, where the dressings are done daily.

There were 69 admissions, 9 discharges on probation and 29 deaths.

This Colony was included in the itinerary of Mr. Frank Oldrieve, the Secretary of the British Empire Leprosy Relief Association, who was on tour this year on behalf of his organisation in the East, Central and South African Colonies and Possessions, for the purpose of reporting to his Association on the prevalence of leprosy and of stimulating local interest in the new methods of treatment.

Every facility was accorded to him by this Government to see for himself what was being done in the Colony to combat this scourge, and his reports on the measures in force were favourable. His lectures and lantern slide demonstrations were well attended and aroused much interest.

With the prospect which is now held out that leprosy is a curable disease, especially in its earlier stages, the difficult subject of the relation of lepers to the healthy, their segregation from their fellow men, and their treatment, must undergo a radical change, and we may assume that those institutions, settlements and asylums, where these unfortunates are to-day congregated together in order to do little more than to die, will in time become things of the past, and will be replaced by special hospitals and treatment centres, which will be provided with all laboratory facilities, electrical and other appliances, for the scientific diagnosis and treatment of this disease and its complications.

In this connection Mr. Oldrieve's visit has done much to enlighten both official and public opinion.

Dr. Montgomery, of the Nyadiri Mission, who had charge of the newly inaugurated little treatment centre in the Mtoko-Mrewa district, unfortunately left about the end of the year, and has not been replaced, consequently the lepers undergoing treatment here have been in receipt of somewhat irregular medical attention. It is hoped, however, to start again in this district in the near future, and negotiations are now proceeding in this connection.

It is not easy to estimate the number of lepers in the Colony, the discovery of early cases being always a difficulty. It is gratifying to note, however, that early cases are beginning to present themselves for treatment, and as the disease is well known in all its phases to the native, it is hoped that with the prospect of relief which is now held out to them, they will cease hiding the disease till it is no longer possible to conceal it, in order to escape the dreaded compulsory segregation under the Leprosy Repression Ordinance.

Venereal Diseases.—The campaign against venereal disease, which was commenced some two or three years ago, continues to be vigorously waged both in town and country all over the Colony, and special anti-venereal clinics, apart from existing hospitals, are now operating at Salisbury, Bulawayo, Gatooma, Ndanga, Belingwe, Morgenster, Bikita and Buhera, and further centres are being formed as occasion demands.

The following is a return of the cases treated during 1927 at the various centres: —

Place.	Natives.
Salisbury	473
Bulawayo	374
Gatooma	324
Mrewa and Mtoko	45
Que Que	121
Morgenster	281
Mnene, Belingwe	592
Bikita	57

In addition to the above, the admissions to general hospitals on account of venereal disease or its sequelæ were as follows:—

Place.	Natives.
Umtali	1
Gwelo	42
Victoria	5
Gwanda	22
Enkeldoorn	6
Shamva	22
Belingwe	5
Sinoia	—

One interesting fact has evolved in the course of an extended enquiry into the prevalence of venereal disease amongst the indigenous races who are living in seclusion in their own native reserves, namely, that the natives who are living in those large reserves to the south-east, which are as a rule low-lying, hot and with a low rainfall, are heavily infected with frambœsia or yaws, but that there is very little true syphilis amongst them, the cases which are coming to the hospitals, dispensaries and mission stations asking for treatment being mostly in the tertiary stage.

Enquiries are being pursued into the distribution and comparative incidence of these two similar diseases, and though the differential diagnosis presents many difficulties, it may be accepted that natives resident in the reserves in the more tropical parts of the country are more likely to suffer from yaws, whilst true syphilis is more commonly met with in natives in employment who are resident in towns, mines or in the vicinity of the same.

Neither syphilis nor yaws, on the other hand, is unduly prevalent amongst natives living on reserves which are situated at the higher altitudes.

Getting into direct touch with the great mass of the persons infected does not present as many of the difficulties as are experienced in older and more civilised communities, for here the native shows no diffidence or aversion to presenting himself for treatment when suffering from venereal disease, as he feels no shame in his condition, and is greatly impressed with the celerity and completeness with which his more obvious symptoms are removed, especially those which are producing pain and disfigurement, the rapid disappearance of which he looks upon as little less than witchcraft. The real difficulty lies in first getting a hold of the early cases when they are in the most infectious stage, and, secondly, in inducing them to continue treatment when the external symptoms have disappeared.

Another source of trouble and difficulty in dealing with venereal disease lies with what is known as the travelling prostitute, who does not come up for treatment when infected, chiefly because of loss in earnings, who is difficult to follow up in all her peregrinations, and who may infect whole batches of natives on farms or mines before she is detected, and when this is done, she has passed on elsewhere, often under another name. Efforts are now being made by the Police, as well as mining companies and local authorities, to check and control this traffic as far as the law will allow.

Pressure, of course, continues still to be exerted upon the Government to exercise more vigilance in the detection and eradication of venereal disease amongst natives, especially where brought into contact with Europeans, and many fantastic suggestions are advanced, most of them coming from persons who have never studied the conditions existing, nor have they taken the slightest trouble to make themselves conversant with what is being done or what is going on around them.

Venereal disease, though brought more before the public eye in the last few years, cannot be said to be increasing to any great extent, and still remains in the neighbourhood of 1 per cent. of natives in employment, from among whom more or less reliable statistics can be obtained.

INTERNAL PARASITES.

Bilharziasis.—The Medical Inspector of Schools has on more than one occasion drawn attention to the number of cases of bilharzia occurring amongst children attending schools, and a systematic examination of the children attending certain of the schools most affected has accordingly been commenced.

So far, only the reports from the Prince Edward School, Salisbury, are to hand, but they in themselves are sufficiently disquieting, as in this school alone 7.5 per cent. of the schoolboys examined at the Public Health Laboratories show active infestation with this parasite.

Circular instructions are now being prepared and issued, and arrangements made for further investigations in other centres, and warnings have been issued to school authorities to prevent bathing in pools and rivers likely to be infected.

Ankylostomiasis or Hook-worm Disease is not commonly found in Southern Rhodesia, but Dr. Martin has drawn attention to the fact that a number of natives admitted to hospital on account of chronic swellings of the lower extremities have, on examination at the Laboratory, been found to be infected with hook-worm, and that their symptoms rapidly cleared up under appropriate treatment. This is of special interest to employers of mine labour, where invalidism from chronic enlargement of the lower limbs is all too frequent, though, of course, it is not a certainty that all these cases of "swollen legs" are due to hook-worm.

CHAPTER V.—HOSPITALS AND ASYLUMS.

There were 9,409 admissions to general hospitals in 1927, compared with 8,995 in 1926 and 7,875 in 1925; of these, 4,231 were Europeans and 5,178 natives and coloured. European admissions increased by 404, and native and coloured by 10.

The curve of European admissions was highest in December and lowest in February; the native, highest in October and lowest in June.

Patients units number 280,579; Europeans being 78,808 and coloured and native 204,771, as compared with 250,833 total units in 1926, of which 68,373 were Europeans and 182,460 coloured and native.

Salisbury Hospital.—The past year, 1927, again shows expansion in every department of the hospital, and year by year, as the work grows in magnitude and importance, further accommodation is required to meet the pressure of applicants for admission.

Two new wards were opened early in October. One, capable of accommodating 18, has been devoted to male surgical cases; the other, which is reserved for children, being sub-divided into two sections for boys and girls respectively. This children's ward is exceedingly lengthy and airy, and efficiently fills a long-felt want.

When the necessity of a children's ward was under discussion, some doubt was expressed as to whether too generous accommodation was not being made for the needs of this small section of the community. However, since the opening of the ward that doubt has been well and truly laid, for the position to-day is that the ward is constantly full, and there are often more applicants than there are beds available.

With these two wards opened, it was possible to provide increased medical and surgical facilities in the hospital for general patients, and it may be said that the facilities now provided adequately meet the demands for the time being.

Increase in accommodation for patients must be preceded or accompanied by a proportionate increase in accommodation for staff, and further accommodation must be provided for the nursing staff before any further extension of the hospital itself can be contemplated.

In the European section of the hospital, admissions this year were 1,570, as compared with 1,343 for the previous year. This figure does not include the increasing number of patients who are dealt with in the Out-patients' Department. This important though separate department is being developed in this and other hospitals throughout the Territory.

Admissions to the native hospital were 1,527, as against 1,386 the previous year. During most of the year the native hospital was filled to overflowing, and for several months it was found necessary to erect, in addition, a large marquee in the grounds in order to cope with the many patients seeking admission.

The radiographic plant has been thoroughly overhauled and brought up to date, but was not completed before the end of the year.

Memorial Hospital, Bulawayo.—The number of admissions during the year was 1,209 Europeans, as compared with 1,099 last year; and 1,306 natives, as compared with 1,267 in 1926. This is an increase of 110 European cases and 40 native cases.

The total number of operations performed was 784. An analysis of this figure shows the following results:—Operations on Europeans: major, 249; minor, 363. Total, 612. Operations on natives: major, 66; minor, 106. These figures serve to emphasise the need for a new theatre block with proper provision for sterilisation. In this connection plans are well advanced and building will begin early in the new year. The old theatre will be converted and will provide excellent accommodation for the radiographer, who is at present working under difficulties.

Umtali Hospital.—Shows a decrease in both European and native admissions. The figures are 381 Europeans, compared with 392 last year; and 372 natives, as against 521 in 1926. In spite of the decrease, the native wards are overflowing, and every available bit of accommodation has to be brought into use. The number of operations performed continues to increase, the figures for the last three years being: 1925, 114; 1926, 130; 1927, 173. The total number of out-patients treated was 377.

The building of a new hospital has been approved, and construction work will be begun shortly.

Gwelo Hospital.—The number of patients continues to increase. European admissions were 314, as compared with 285; and native admissions 535, as compared with 499. No less than 76 cases of pneumonia were treated in hospital. Lister's vaccine was used frequently, but the results were disappointing. There were 55 rheumatic and 24 cases of scurvy.

The question of additions to the existing native hospital or the entire re-building of the hospital is under consideration.

Fort Victoria Hospital.—The new buildings situated on the highest ground in the town were occupied early in the year, and constitute a very striking improvement on the old hospital.

One hundred and fifty-three white patients and 146 natives were admitted during the year, as compared with 116 Europeans and 119 natives last year. Thirty-four operations were performed.

The new building has been criticised as being in excess of the requirements of the district, but though the accommodation provided has not yet been fully taken advantage of, it is only provident to look ahead of immediate needs, and as the admissions are yearly increasing, at the present rate of expansion it will not be long before the hospital as built will be not only fully occupied, but may call for extensions.

Gwanda Cottage Hospital.—Europeans admitted numbered 39 and natives 134, as compared with 38 and 153. Twelve general anæsthetics were given during the year.

A new block for European patients was completed during the year and has proved satisfactory. Further additions are still required, however, in the shape of better accommodation for the nursing staff, and improved kitchen and domestic offices.

Enkeldoorn Cottage Hospital.—Admissions have been 69 Europeans and 113 natives, as compared with 79 Europeans and 93 natives last year.

The Medical Officer reports that the hospital was constantly full to overflowing, and many hospital cases had to be treated in private houses. The erection of a new European hospital has been decided upon.

The Government Medical Officer at Enkeldoorn visits Umvuma once a fortnight, the cost of his transport being met from the funds of this Department.

Gatooma Hospital.—The new European hospital was occupied in July and the native hospital in November. Admissions of Europeans were 241 and natives 489, comparing with 246 and 517 last year. Sixty operations were performed.

The same criticism has been levelled here as at Victoria Hospital, and here also the same reply may be given, that it will not be long before the hospital beds provided, both for Europeans and natives, will be fully taken advantage of, and it is better to build ahead of actual requirements when designing public buildings which have to cater for an increasing population.

Shamva Cottage Hospital.—The accommodation provided in the native hospital is now inadequate to the demands made upon it, and the erection of a larger building is receiving consideration. Europeans admitted were 97, as compared with 107 last year, and 196 natives, compared with 191 in 1926.

Sinoia Cottage Hospital.—Admissions: 142 Europeans, as compared with 116; and 254 natives, as compared with 149 in the previous year.

The very great increase in native patients has made the provision of additional accommodation imperative, and the Government has decided to proceed with the erection of a new native hospital.

There were 11 operations under general anæsthesia.

Belingwe Cottage Hospital.—Admissions: 16 Europeans, as compared with 6 last year; and 106 natives, as compared with 45—a considerable increase. The buildings themselves are not very suitable for hospital purposes, but are still serviceable, the hospital being more in the nature of a local relieving ward with a resident qualified nurse.

Statistics relating to the principal diseases treated in Government hospitals during the year will be found in the appendix to this report.

A. M. FLEMING,
Medical Director.

JAN 1931

PART II.

Report of the Medical Inspector of Schools for the Year 1927.

Public Health Department,
Salisbury,
21st March, 1928.

The Medical Director,
Salisbury.

I have the honour to submit my annual report on the work of the schools medical service in Southern Rhodesia during the year 1927.

The children examined this year comprised:—

(1) Children nine years of age and under;
(2) Admissions since last inspection, not previously examined;
(3) "Specials," *i.e.*, children who were considered by the parent or guardian to be suffering from any defect;
(4) All those recommended, at previous inspections, to receive medical, surgical or dental treatment;
(5) All children in small outlying schools, independent of age group.

One hundred and one schools were inspected, as compared with seventy-six during the previous year. It will be seen that a smaller number of children were examined, *i.e.*, 3,578, as compared with 4,349 in 1926. This decrease in the number of pupils examined was largely due to the fact that the age group comprised the younger children in attendance at the various schools, and the time occupied in visiting and inspecting a greater number of outlying schools. It will be seen that the number of schools inspected in 1927 exceeds the number inspected in 1926 by 25.

In the report for 1926 attention was drawn to the schools dental service instituted in 1925. During the year under review ten schools were visited by the Schools Dental Surgeon, and 469 cases were treated.

Reference to the special report of the Schools Dental Surgeon will show that, owing to the large number of dental cases which still remain untreated, he has been unable to visit any school a second time.

To obtain an insight into the improvement in dental conditions since the institution of this service, comparison must be made with the findings of 1924, when a similar age group was inspected. In that year, of 1,817 children examined, 859 (47.27 per cent.) were found to have decayed teeth. Inspection during the past year shows that of 3,578 inspected, 1,127 (31.49 per cent.) were found to be dentally defective. This improvement of 15.78 per cent. shows that marked beneficial results have already accrued. When it is borne in mind that one section of this Colony has not yet been visited, the above figures are very gratifying.

The statistics of dental caries recorded under "Dental Diseases and Defects" emphasise the necessity not only for the introduction of the dental service, but the urgency for increasing the staff thereof. The appointment of an additional Dental Surgeon is now under consideration by the Government, and it is to be anticipated that before long such additional assistance will be forthcoming.

Schools Examined.—The details given below show the various schools visited and the number of children (boys and girls) examined:—

School.	Boys.	Girls.	Specials.	Total.
Emerald Hill Orphanage	22	27	...	49
Avondale Preparatory	48	37	1	86
Hatfield Preparatory	17	18	7	42
Hillside Preparatory	10	10	2	22
Parktown	23	19	4	46
Primary, Salisbury	21	20	11	52
Prince Edward Boys' High School ...	158	...	53	211
Girls' High School, Salisbury	47	145	50	242
St. George's School, Salisbury	13	...	14	27
Convent School, Salisbury	51	73	22	146
Citrus Estate Farm School, Mazoe ...	2	2	...	4
Hartley Public School	16	11	1	28
Bellevue Preparatory, Concession	3	3	...	6
Thorndyke Farm School	2	3	...	5
Norton Farm School	7	4	...	11
Shamva Mine School	29	22	2	53
Sinoia Public School	22	20	...	42
Arcadia Farm School	8	3	...	11
Bindura Farm School	9	8	3	20
Lilfordia Aided Farm School	5	2	...	7
Riversdale Farm School	11	7	...	18
Rosebank Farm School	2	1	...	3
Marshlands Farm School	1	2	...	3
Gowrie Farm School	...	2	...	2
Donnington Hall Aided Farm School ...	1	3	...	4
Marandellas Public School	9	10	...	19
Looe Farm School	5	8	...	13
Rudolphia Farm School	3	3	...	6
Rumbavu Aided Farm School	1	6	...	7
Welcome Home Farm School	...	2	...	2
Inshallah Aided Farm School	2	...	...	2
Stonybroke Aided Farm School	5	4	...	9
Umtagedza Aided Farm School	2	1	...	3
Enslinsdeel Aided Farm School	10	17	...	27
Wonderklip Aided Farm School	10	2	...	12
Ngezi Poort	4	3	...	7
Uitkyk Farm School	6	2	...	8
Wildebeestelaagte	4	4	...	8
Enkeldoorn Public School	16	26	1	43
Umvuma Public School	17	12	4	33
Vlakplaats Farm School	16	13	...	29
Mtsiki Farm School	7	3	...	10
Welgetroos Farm School	1	7	...	8
Eiffel Flats Public School	16	14	7	37
Que Que Public School	32	29	5	66
Gatooma Public School	29	32	4	65
Selukwe Public School	13	16	...	29
Convent School, Gwelo	18	21	3	42
Chaplin High School, Gwelo	49	40	33	122
Lalapanzi Farm School	7	12	...	19
Hunter's Road Farm School	2	6	...	8
Willoughby's Spur Farm School	6	4	10	20
Gath's Mine Farm School	5	6	1	12
Shabani Mine School	18	24	4	46
Fort Victoria Public School	18	18	6	42
Primary School, Bulawayo	66	37	11	114
Convent School, Bulawayo	60	96	12	168
Hillside Preparatory, Bulawayo	19	18	...	37
Milton High School, Bulawayo	119	...	27	146
Plumtree High School	24	...	35	59
Plumtree Village School	33	5	4	42
Bellevue Preparatory, Bulawayo	18	15	...	33

School.	Boys.	Girls.	Specials.	Total.
Morgenster Farm School	7	4	...	11
Shangani Farm School	4	7	...	11
D.R.C. Orphanage, Daisyfield	19	14	5	38
Victoria Plots Farm School	5	11	3	19
Raylton Public School	39	26	...	65
Marula Farm School	3	6	...	9
Cement Farm School	5	2	...	7
Matopos Aided Farm School	3	2	...	5
Lushongwe Farm School	6	9	...	15
Wankie Mine School	17	18	...	35
Gwanda Public School	14	10	...	24
Sauerstownship Preparatory	13	11	...	24
Lonely Mine School	21	15	4	40
Glenville Preparatory, Bulawayo	4	7	...	11
Sawmills Farm School	7	6	...	13
Matopos Agricultural School	8	...	...	8
Rusape Farm School	6	12	...	18
De Hoop Farm School	13	2	...	15
Makoni North Farm School	6	9	...	15
Chinika Farm School	6	6	...	12
Umguza Farm School	3	6	...	9
Diana Farm School	4	5	...	9
Dominican Convent, Umtali	32	35	1	68
Macheke Public School	5	4	...	9
Penhalonga Public School	16	14	2	32
Queen's Mine School	6	2	1	9
Johannesrust Farm School	12	14	...	26
The Meadows	9	5	...	14
Melsetter Public School	22	21	...	43
Ruwaka Farm School	8	5	...	13
Eveline High School, Bulawayo	32	136	31	199
Umtali High School	66	74	44	184
Chipinga Farm School	19	13	...	32
Cheshire Farm School	13	3	...	16
The Glade Aided Farm School	5	...	...	5
Mount Selinda Farm School	1	7	...	8
Mthabezi Mission School	6	2	...	8
Dandazi Aided Farm School	...	2	...	2
Orangedale Farm School	1	3	...	4

An Assistant Lady Medical Inspector of Schools has now been appointed, and will take up her duties at the commencement of the first term, 1928. Her duties will comprise medical inspection of all girls in attendance at the schools in the larger centres, and in schools which are accessible by railway, and will include the usual lectures to parents, and lectures on child-welfare and antenatal hygiene. This appointment should prove most valuable, for with her assistance it will be possible to arrange detailed examination of children.

School Buildings.—During the past year a substantial advance has been made in the provision of school buildings, hostels and teachers' quarters, and if only this rate of progress could be maintained for a few years, the position as regards school accommodation in the Colony would become entirely satisfactory. Although a large amount of money has been expended upon the provision of school buildings, a great deal more remains to be done to obviate the necessity of renting buildings which are not ideally suitable for school purposes, as is at present the case.

The smaller centres are gradually being, where necessary, provided with properly constructed school buildings. As far as small farm schools are concerned, expenditure other than sufficient to maintain temporary brick and thatch school-rooms is not deemed justifiable. Such schools are, at the moment, essential, but they by no means attain the ideal which should be set for scholastic buildings, and it would be idle to spend further money on them.

Children Examined.—The total number of children examined during the year 1927 was 3,578. Of these—

885 (24.73%) were recommended for medical or surgical treatment.
1,127 (31.50%) were recommended for dental treatment.

The number of cases requiring treatment remains relatively high. The age group examined this year must be taken into consideration; the majority of the children had not been previously examined; their defects, therefore, had not been pointed out to the parent or guardian, who, in many instances, was unaware that the children were suffering from conditions which required medical, surgical or dental treatment.

Attendance of Parents.—

	1927.	1926.	1925.	1924.
Parents present ...	837 (23.39%)	801 (18.41%)	771 (21.94%)	517 (28.45%)
Parents represented	776 (21.68%)	1,572 (36.14%)	955 (27.17%)	697 (38.35%)
Parents absent ...	1,965 (54.91%)	1,976 (45.43%)	1,788 (50.88%)	603 (33.18%)

It will be seen from the above statistics that the attendance of parents at the time of medical inspection shows an improvement on previous years.

I would again emphasise the importance of parental attendance, which gives an opportunity to point out minor defects, and advise any necessary treatment.

Clothing and Footgear.—During the inspection of 1927, nine cases were found in which clothing was faulty. This figure is satisfactory. Taking the children collectively, their clothing is usually of good quality and clean, though the fitting of garments does not receive the attention it merits, and recommendations have been made regarding this in previous reports, but seem to have had no practical result, and this applies to costumes for games and gymnasium as well as ordinary clothing. Undoubtedly more could be done by treating this subject as an educational one, and the teacher might also give useful hints to parents in the choice of garments.

Unsuitable footgear is still the rule, rather than the exception. The harm accruing from ill-fitting footgear in infancy leads to disabilities in later life which would be avoided by discreet choice of boots and shoes during school life. Under no circumstances should children be permitted to go barefooted in Rhodesia for obvious reasons.

Children's headgear is another matter to which the parents should pay strict attention. The danger to which children in a sub-tropical country are subject through lack of headgear affording adequate protection from the sun's rays has been pointed out in previous reports. Caps and even felt hats, unless suitably lined, are unsuitable for children in this country. Helmets which are lined, and felt hats with pugarees are the only reasonable headgear, and should, where possible, be made compulsory.

Action taken on previous Recommendations.—The numbers recommended for treatment in 1927 were as follows:—

Doctor	885
Dentist	1,127
Doctor and Dentist	43
Total	2,055

The numbers recommended for treatment in 1926 were 1,126. Action taken on these recommendations was found to be as follows:—

Vaccination	314
Dental (by Schools Dental Surgeon)	486
Medical	9
Surgical	133
Total	942

One hundred and two cases of tonsils and adenoids have been treated surgically.

Twenty-four cases of defective vision have been supplied with suitable glasses.

Three hundred and fourteen successful vaccinations have been carried out.

Four hundred and eighty-six cases have been dentally treated by the Schools Dental Surgeon. This number does not include dental treatment carried out by the private dental surgeons resident in towns where the Schools Dental Surgeon does not visit. It has not been found practicable to give accurate statistics of the latter, owing to the inaccuracy of the histories obtainable from individual children.

In 1925 the percentage of cases treated on the previous year's recommendation was 69.92. In 1926 the percentage was 52.24. In 1927 the percentage was 83.65.

The above figures show a marked increase in the number of cases where action has been taken on the advice given by the Medical Inspector.

In view of the fact that there are no school clinics, cases recommended for surgical treatment or medical treatment are advised to consult their own medical attendant. Provision is now made at the various hospitals throughout the Colony for the free treatment of children of indigent parents. Undoubtedly advantage is being taken of such concessions, and in consequence an appreciable number of defects have been remedied which in the past would have been neglected. But it is to be recorded with regret that in certain instances where children have been granted free treatment at one or other of the larger centres, parents, rather than pay for the transportation of their children, have declined for the sake of a few shillings to take advantage of the free treatment offered by the Government. It might be pointed out that in every case these parents were in a position to afford the small expense entailed.

Nutrition.—Of the 3,578 children examined, 146 (4.08 per cent.) were found where nutrition was below normal; 7 (0.19 per cent.) where malnutrition was definitely present; leaving 3,375 (94.32 per cent.) where nutrition was normal.

There were 44 cases (1.22 per cent.) where nutrition had improved since previous examinations, but was still below normal. There were six cases (0.16 per cent.) suffering from adiposity. These figures are satisfactory, the fact that the age group was this year, with few exceptions, confined to children below nine years of age accounting for the very high percentage where nutrition was normal, the nutrition of this age group, so far as Rhodesia is concerned, being better than that of children over nine years of age.

Younger children receive greater parental attention in relation to food, sleep, etc., are not overworked educationally, nor do they indulge in strenuous games causing fatigue. Again, the Rhodesian child below the age of nine years shows but little deleterious effect from life in a sub-tropical country. The Chief Medical Officer to the Board of Education, England, contributed an article to the *British Medical Journal*, 10th December, 1927, on "The Health of the School Child." I quote the following extract from it:—

> "It is careless mothering, ignorance of upbringing, the lack of nurture, rather than actual shortage of food, which result in the malnourished child. Insufficient sleep, chronic fatigue, absence of fresh air, the lack of exercise are exerting a very bad influence day by day on the well-being of multitudes of children. Magnificent schemes and expensive staffs are of no avail if mothers and teachers neglect these simple matters. Disease is a cause of malnutrition, enlarged tonsils and adenoids, decayed teeth, tuberculosis, and the like. Hence to provide more food, or even better food, is by no means the only answer to malnutrition."

Cleanliness and Condition of the Skin.—There were 49 cases of uncleanliness, as compared with 61 in 1926. It has been pointed out in previous reports that accurate statistical records with regard to uncleanliness are impossible to obtain, owing to the fact that surprise visits to schools are not practicable. In other countries where populations are not so scattered, the Medical Inspector usually has the assistance of a school nurse, whose duty is to pay unheralded visits to schools, thus enabling her to find the children in the condition in which it is their habit to attend school.

The majority of Rhodesian schools are now equipped with means of cleansing hands and face, in the form of washing basins, and a proper supply of water and soap. With such facilities afforded, example, imitation and custom are established, leading finally to a developed habit of cleanliness. Much can be done by regular inspection and a demand for personal cleanliness by the teacher in charge.

The following are details of skin diseases from which children were found to be suffering:—

Scabies	15
Acne	14
Veld sores	7
Furunculosis	3
Impetigo	1
Psoriasis	1
Eczema	1
Seborrhœa	1
Ichthyosis	3
Leucoderma	3
Ringworm	1
Warts	3

Dental Diseases and Defects.—Of the 3,578 children examined, 775 (21.66 per cent.) were found to have one to four decayed teeth; 352 (9.84 per cent.) were found to have more than four decayed teeth. In all, 1,127 (31.50 per cent.) cases required dental treatment.

Under this heading reference should be made to the report of the Schools Dental Surgeon, where a comprehensive *resumé* of two years' dental work in the various schools throughout the Colony will be found.

It will be seen from his report that much has been done already to remedy dental defects, but that the field of operations is a large one, and incapable of being dealt with unless the service is augmented by the proposed additional assistance. The whole subject is dealt with in detail in his report, and it would be redundant to comment further under this heading.

Ear Disease and Defects of Hearing.—There were 31 cases of organic ear disease. Of these, 6 were found to be suffering from active otorrhœa, and were recommended for treatment. There were 25 which showed old perforation of the tympanic membrane, but as no active disease existed, no further treatment was recommended.

Organic.—Otitis Media.—

Right ear (active)	1
Left ear (active)	5
Right ear (not active)	6
Left ear (not active)	8
Right and left ears (not active)	11

Functional.—Cerumen.—

Right ear	7
Left ear	9
Right and left ears	17

There were 2 cases of defective hearing, which are not included amongst the above defects, due to such causes as nasal and eustachian catarrh, nerve deafness, etc.

The functional cases, amounting to 33, were in most instances due to an accumulation of wax, which was, in the case of boarders, treated at the time of examination by the Medical Inspector.

Impaired hearing naturally retards education, and it is obviously imperative that both organic and functional cases be treated with the least possible delay.

Nose and Throat Defects.—Of the 3,578 children examined, there were 964 (26.94 per cent.) cases defective, as compared with—

27.13 per cent. in 1926
25.29 per cent. in 1925
24.33 per cent. in 1924

Of this number, 264 (27.38 per cent.) were recommended for operation, the remainder for treatment other than operative.

The following table shows the statistical tonsillar defects:—

Right and left tonsils markedly enlarged	291
Right tonsil markedly enlarged	34
Left tonsil markedly enlarged	16
Right and left tonsils slightly enlarged	438
Right tonsil slightly enlarged	78
Left tonsil slightly enlarged	49
Right tonsil markedly and left tonsil slightly enlarged	33
Left tonsil markedly and right tonsil slightly enlarged	17

Adenoids.—The number of children found to be suffering from adenoids was 8 (these are included in the total of 964 under "Nose and Throat Defects") and all were recommended for surgical treatment.

Other Diseases and Defects of the Nose and Throat.—

Adenoid facies	8
Mouth breathers	46

Palates.—

High and narrow	11
High	3
Cleft	4

Uvula.—

Bifid	2
Elongated	2

Enlarged Glands.—

Submaxillary	1,907	(53.29 per cent.)	
Tonsillar	298	(8.32 per cent.)	
Cervical	23	(.65 per cent.)	
Inguinal	101	(2.82 per cent.)	(boys only)
Thyroid	9	(.25 per cent.)	

Defective Articulation.—There were 11 cases of defective articulation, comprising four stammerers, one lisp. The remaining six had abnormal speech due to causes such as nasal obstruction, chronic laryngitis, etc.

Comments on Nose and Throat Defects.—Tonsils and Adenoids.—These defects constitute the large percentage of the total defects found during the course of routine medical inspection. The number recorded this year is not confined to the age group examined, but includes all special cases found and recommended for operation in previous years, and who still remain untreated. Reference to the heading "Action Taken on Previous Recommendations" shows that 102 cases of tonsils and adenoids were treated surgically in 1927. It is regrettable that parents postpone or neglect to have such defects treated. An improvement without operation is seldom seen; even if such improvement takes place, the facial expression concomitant with enlarged tonsils and adenoids remains throughout life. Local medicinal treatment is useless. Many parents view the operation of tonsillectomy with fear, but it is only to be regarded as serious in adults who have had repeated attacks of tonsillitis, and early removal undoubtedly gives better results.

Palates; Abnormal Uvulas; Defective Articulation.—The children possessing these defects were found to be normal as regards mentality. Any of the above which called for special treatment were advised accordingly.

Defective Vision and Eye Disease.—The total number of children examined as regards their vision was 3,398, of whom 289 (8.50 per cent.) were found to be suffering from defective vision, squint, etc. Of the above number, 87 have already been provided with glasses, of which 57 are satisfactory. The remaining 30 were recommended for re-examination and the provision of suitable lenses. According to the usual practice, all cases found to be defective were placed on the "special" list of cases to be examined at the next inspection, in order that they may be kept under observation, and to ascertain whether recommendations for treatment have been complied with.

The following external eye diseases were discovered:—

Conjunctivitis	296
Blepharitis	4
Conjunctivitis and Blepharitis	19
	319

Strabismus (squint).—

Right internal strabismus	20
Left internal strabismus	24
Right external strabismus	2
Variable internal strabismus	3
Variable external strabismus	2

All the above cases were recommended for treatment. Unusual cases and cases of defective vision due to mechanical interference:—

Corneal opacities	3
Lateral nystagmus	2
Traumatic cataract	2
Aphakia (congenital)	1
Dacryocystitis	1
Irides of different colours	1

The percentage of eye defects amongst the school children shows but slight variation:—

1927	8.50 per cent.
1926	6.99 per cent.
1925	8.82 per cent.

The following paragraph extracted from last year's report is worthy of repetition, especially as the age group examined in 1927 constituted the younger children:—

> "The percentage of eye defects amongst the children is by no means large. It is generally found that the younger children, about six or seven years of age, show a higher percentage of defects. This is accounted for by the fact that the infant has normally a hypermetropic or 'far-sighted' eye, which eye is shorter in its antro-posterior direction than the normal eye; but as the child grows older the eye lengthens until it becomes normal in size. These cases are always relieved by the temporary provision of suitable lenses. In the case of myopic or short-sighted eyes, the eye is longer in its antro-posterior direction than the normal eye. The latter condition is more serious than the first condition; school work tends to aggravate the condition, especially reading, writing or sewing. All cases of short sight require correction by suitable lenses."

Eighty-seven cases have been provided with glasses. These cases are categorised as "specials," and are being kept under strict medical observation. Their visual acuity is tested at each inspection, and they are receiving special consideration by principals and teachers. Where necessary, short-sighted children have their clerical teaching curtailed in order to minimise the risk of rapid progression of defective vision.

During the year, in two of the larger schools, a conjunctivitis of a highly infectious type caused some anxiety. Children became infected by direct contact with contaminated towels, etc. As soon as the disease was diagnosed, the strictest prophylactic measures were instituted, individual cases were isolated as far as possible, and all towels, etc., sterilised. The epidemic was soon well under control, and no permanent disabilities resulted therefrom.

Heart Diseases and Disorders of Circulation.—The following will show the divisions in which the various conditions of the heart have been placed:—

Organic	5
Functional	636
Normal	2,937

The following explanatory details are given:—

Organic.—	
Mitral incompetency	3
Mitral stenosis and incompetency	2
Functional.—	
Tachycardia (rapid heart)	9
Brachycardia (slow heart)	1
Anæmic and malarial	397
Arrythmia	50
Functional bruits and murmurs	179

The number of cases of serious heart disease discovered at the time of medical examination this year is very small. The age group examined must be taken into consideration, owing to the rarity of the serious infantile illnesses in Rhodesia to which heart diseases are attributable.

Lung Diseases.—Tuberculosis (Lungs).—Three cases, which had a history of tubercular lung infection, but showed no clinical evidence of active disease. It was therefore considered that the disease was quiescent, and these cases will be kept under medical observation.

Glands.—Four cases had a history of tubercular infection of cervical glands, and had clinical evidence to support this in the form of operation scars, etc., but no palpable glands were present which would suggest any active infection. They are considered to be cured cases.

One case had a history of tubercular infection of the mesenteric glands, but no clinical evidence of the disease.

In all eight cases were discovered, none of which required medical treatment. The above figures show that tubercular infections are a negligible quantity, and there is almost a complete absence of bone and joint tuberculosis and tuberculosis of the cervical and mesenteric glands amongst the children in attendance at the various schools.

There is no record available of cases of tuberculosis amongst children not attending Government Schools.

Bronchitis and Bronchial Catarrh.—There were 13 cases of bronchial catarrh and bronchitis, one case of pleurisy and one case of asthma recommended for medical treatment. The parents or guardians were notified accordingly.

Flat Chests, Poor Expansion, Deformities, etc.—

Flat chests and poor expansion	454
Pigeon chests	21
Sunken sternum	6
Left dorsal scoliosis	24
Right dorsal scoliosis	7
Kyphosis	150
Lordosis	1
Genu valgum	29
Talipes valgum	1
Pes planus	1

Physical Training.—Some advance has been made under this heading during the past twelve months, but a great deal still remains to be done. At the Salisbury and Bulawayo girls' schools steps have been taken to provide gymnastic apparatus which should prove to be a great boon to the children from a physical point of view. It is to be anticipated that during the coming year the Government will endeavour to provide and equip gymnasia in all the larger centres together with efficient instructors. At the present moment, although the children in the majority of the schools undergo a certain amount of physical training, the system practised is not satisfactory. The principal cause of this is the size of each class, whereby children in need of individual observation do not receive sufficient care. This is a matter of paramount importance, and it should not present insuperable difficulties to arrange for classes of children not exceeding 15 or at the outside 20. Fifteen minutes' strenuous training is ample per day per child. In the smaller schools teachers should endeavour to make a study of this question so that the children under their care may receive good and beneficial training.

Malaria, Blackwater Fever, and Enlargement of the Spleen.—Of the 3,578 children examined, 1,360 (38.01 per cent.) had a malarial history, as compared with 58.33 per cent. in 1926, 60.61 per cent. in 1925, and 51.27 per cent. in 1924.

The percentage of cases where a malarial history was obtained shows a considerable reduction. This was to be expected in view of the age group inspected.

Blackwater Fever.—Twenty-four children had a definite history of blackwater fever, of which one child had a history of five attacks and one of two attacks.

Enlargement of the Spleen.—The following table shows the number of children who were found to be suffering from enlargement of the spleen:—

Spleen slightly enlarged	182	(5.08 per cent.)
Spleen markedly enlarged	132	(3.68 per cent.)
Spleen reaching almost to umbilicus	35	(0.98 per cent.)
Spleen filling almost half of the abdomen	19	(0.53 per cent.)
Total	379	(10.59 per cent.)

Comparative figures for the two previous years are as follows:—1926, (13.52 per cent.); 1925 (21.42 per cent.).

Bilharziasis.—Sixteen boys were found to be suffering from this disease. Much publicity has been given in the past year to this disease both through the medium of Press articles and the issue of pamphlets to the schools throughout the Territory. As in some instances children may contract the disease and be unaware of the fact, arrangements have been made with the Public Health Laboratory at Salisbury for all boys in attendance at the various schools to be examined for the presence of Bilharzia ova in their urine in order to ascertain the percentage of cases infected and to ensure their early treatment.

Infectious and Contagious Diseases.—The following table shows the number of children examined who have suffered from infectious and contagious diseases during their life to date:—

Measles	1,449
Whooping cough	1,232
Chicken-pox	1,086
Scarlet fever	41
Diphtheria	20
Mumps	193
Enteric fever	26
Dysentery	30
Pneumonia	40
Small-pox	2
Malta fever	4
Infantile paralysis	5

Small-pox and Vaccination.—Of the 3,578 children examined, 2,958 (82.67 per cent.) have been successfully vaccinated, and 620 (17.32 per cent.) were found to be unvaccinated or to have no visible vaccination marks.

Other Diseases and Defects.—

Croup	1
Appendicitis	9
Rheumatic fever	4
Rheumatism	5
Eneuresis	11
Rickets, forehead	1
Colitis	1
Chorea	5
Phimosis	214
Jaundice	4

Mongolian type	3
Congenital amputation, hand	1
Congenital amputation, finger, left hand	1
Epilepsy	2
Scars, Burns and Scalds	7
Fractures	5
Operations.—	
Abdominal	3
Tracheotomy	1
Appendicectomy	8
Mastoid	1
Empyema	2
Amputation, arm	1
Amputation, leg	1
Cleft palate	2
Hare lip	2
Herniotomy	4
Hernias.—	
Right inguinal	2
Left inguinal	1
Right and left	1
Umbilical	1
Herniotomy.—	
Bubonocele	4

Mentality.—There were 22 cases where mentality was much below the normal. A special report on mentally defective children has been furnished departmentally, giving the names of the defectives, with a view to the advisability of establishing special institutions.

H. V. GATCHELL,
Medical Inspector of Schools.

Report of the Schools Dental Surgeon.

Public Health Department,
Salisbury,
17th January, 1928.

The Medical Director,
Salisbury.

I have the honour to submit my report on the dental inspection and treatment of school children in the Colony of Southern Rhodesia for the year 1927.

The schools dental service has been in existence for two years, and it is now possible to form some idea of the amount of dental disease present among school children in the Colony, and of the requirements of the service for dealing with it.

That the services of one dental surgeon are inadequate for the purpose must now be accepted as an established fact.

With the exception of the Primary School in Salisbury, no attempt has been made to deal with children attending town schools; there are, in fact, some country schools which have not been covered by the scheme.

Admittedly, the amount of treatment necessary will be in all probability much reduced when children are presented for treatment at subsequent visits, but even so, there will be more operative work than one officer is capable of performing in twelve months, and it cannot be regarded as a satisfactory state of affairs unless each child comes under dental treatment at least once per annum.

The appointment of a second officer is now receiving the attention of the Government, and it is hoped that the end of the current year will see this appointment made.

It has not been possible to make a second visit to any of the schools which were inspected and treated during 1926, but an insight into the advantages which have accrued to children from the treatment which was given them during that first year has been obtained in cases where children have left one school and gone to another. In these individual cases only have children been presented for treatment for a second time, but it has been noticeable that the dental attention needed by them has been very greatly reduced. This state of affairs is, of course, the aim of the service, and is to be expected, but it is nevertheless gratifying to be able to record it.

Type of Treatment.—This year's report must be considered more in the nature of a continuation of the report of 1926, since the work undertaken has been of much the same type as that of the first year, namely, the treatment of children who in most cases have never received dental treatment, or, at the best, have received it irregularly or only in time of emergency, to relieve pain.

Age Groups.—Treatment has been given this year to children of any age, and has not been confined to age groups.

In a number of cases children of pre-school age have been presented by parents for treatment, and if in the opinion of the Schools Dental Surgeon it was considered necessary, this was accorded them. In most instances this treatment consisted of the extraction of septic temporary teeth under a general anæsthetic.

Schools Visited.—Visits of inspection and treatment have been confined this year, as last, to the country schools, where no resident dentist is practising.

An exception, however, was made to this rule in the case of the Primary School, Salisbury. It was considered desirable that the children attending this school should receive the advantages of the school dental service, since they are in most cases the children of poor parents; of the 124 children attending this school, 26 are resident at the Rhodesia Children's Home.

The following list shows the schools visited during the year:—

School.	Number in attendance.
Victoria Public School (completed)	82
Umvuma Public School	52
Wankie Mine School	43
Dutch Reformed Church Orphanage, Daisyfield	183
Primary School, Salisbury	111
Norton Farm School	9
Hartley Public School	61
Eiffel Flats Public School	69
Que Que Public School	109
Hunter's Road Farm School	10
Attendance at Gwelo Cadet Camp, June, 1927.	

A comparison with last year's report shows that the number of schools visited is much smaller. This is explained by the fact that the schools in this year's itinerary have been situate, with two exceptions, in the larger centres, and have consequently contained more children. The number examined is approximately the same as last year.

Figures showing the Numbers of Children Inspected, Treated, etc.—

Children in attendance		729
Number inspected (boys)	318	
Number inspected (girls)	297	
	615	(84.36%)
Number of children treated	486	
Number of children having carious teeth	450	(73.17%)

From the above table the number of children treated and inspected can be seen.

Seven hundred and twenty-nine children were in attendance at the 11 schools visited, and of this number 615 (318 boys and 297 girls) were sent up, with the permission of their parents or guardians, for dental treatment, a percentage of 84.36. This number shows a slight increase on the percentage sent for examination last year.

Co-operation of Principals of Schools.—Credit is due to Principals of schools for the interest which they, with one or two exceptions, have shown in the dental service. Success of the scheme as it stands at present depends to a large extent on the help which they are able to give, not only by placing the scholars at the disposal of the Schools Dental Surgeon at all times, and in other ways, but also by urging parents to avail themselves of the opportunity of dental treatment for their children when it is at hand.

I should like to take this opportunity of thanking them for their help during this and last year, and of urging them to maintain that interest so that in subsequent years 100 per cent. of the children attending the schools will be presented for treatment.

Percentage Requiring Treatment.—Of the 615 children inspected, 450 (73.17 per cent.) required treatment for dental caries. This is an improvement on last year's findings, although the figure—82 per cent.—which was quoted last year is possibly a little high, owing to the inclusion of scaling operations under this heading.

Comparative Incidence of Dental Caries.—An interesting feature which comes to light from the analysis of the figures for the year is the comparison of the incidence of dental disease in Dutch and British children.

During 1927, a visit was made by the Schools Dental Surgeon to the Dutch Reformed Church Orphanage at Daisyfield. In attendance at this school are 183 children, all of whom are of Dutch parentage on one side or on both. One hundred and seventy-nine of these children were examined, and of this number only 84, or 46.92 per cent., were found to have carious teeth. Comparing these findings with those in schools such as Hartley and Victoria, which are attended almost entirely by children of British parentage, one finds that out of 123 children examined, 101, or 74.6 per cent., required treatment for dental caries to a greater or lesser extent.

The reason for this marked difference is not very apparent, but I am inclined to the belief that dietetic factors play a large part on this causation.

The child of Dutch parentage has in most cases been reared under rural conditions. His diet has been simple and has been made up of mealie-meal porridge, Boer-meal bread, butter and meat; he usually has an adequate supply of green vegetables. An almost entire absence of the sticky, easily fermentable carbohydrates is noticeable, and it is to this that one must give a large share of the credit for his comparative immunity. Heredity also plays its part, for it must be remembered that this factor of simple but sufficient diet has been exercising its influence over a succession of past generations. In connection with foods and their relation to dental caries, the following extract from a paper written by Sir Frank Colyer, L.D.S., F.R.C.S., Eng., and published in the Journal of the Royal Sanitary Institute, November, 1927, is interesting:—

> "Caries is really a question of diet. Get rid of the soft, sticky, starchy foods, lessen the consumption of sugar, and adopt a diet which requires efficient mastication of food of a self-cleansing type, and the disease will pass from our midst. As an example of the slight amount of caries that is seen in children eating a simple diet including but little sugar, I will refer to some figures furnished by Mr. F. Breese of a Poor Law School. In the year 1926 the number of teeth showing fresh caries in 490 children was 409, but as in these figures are included the carious teeth treated in the entrants, whose teeth had not received attention, he estimates that the actual fresh caries was a little over .7 per child.
>
> "I realise that it is hard to alter the diet habits of a people, but if we are to succeed in our conquest of dental caries, we must face the problem boldly, and I believe what will prove beneficial for the teeth will prove of like value to the health of the whole of the digestive tract.
>
> "To put the matter in a practical way, we must get rid of the finely ground flour and resort to the coarser form, which will mean bread that requires more mastication. Let us banish the use of biscuits, forbid sweets, and, where the home budget will allow, end with fruit or uncooked vegetables."

Salivary Calculus.—It has been noted that where children have been entirely free from caries, the deposits of salivary calculus (tartar) have been heavier.

Here one has to consider the constitutional factor as well as the local one. The presence of tartar probably protects the teeth to some extent from caries, in that it neutralises lactic acid, for being more easily soluble than enamel, it is the first to be dissolved. The presence of the tartar itself, however, must be explained constitutionally, since its deposition on the teeth depends on the carbon-dioxide content of the saliva.

Salivary calculus was present on the teeth of 119 children, 20.2 per cent. of the total number examined. In 104 cases the deposit was slight, and in 16 cases severe. In the latter cases the tartar was accompanied by gingival inflammation.

Condition of Gingival Margins.—In 89.4 per cent. of the cases examined, the condition of the gum margins was normal; in 4.5 per cent. cases definite periodontal inflammation was present, and in 6.1 per cent. cases this inflammation was severe, and involved the membrane with exudation of pus.

Condition of Children prior to Treatment.—The dental examination which was carried out on each child before treatment was commenced revealed that 598 children had 1,821 diseased teeth between them, 1,383 being carious and 438 both carious and septic.

The following table shows the average number of carious and septic teeth per child for the years 1926 and 1927:—

	1926.	1927.
Average number of diseased teeth per child of those examined	3.9	3.04

Children Previously Treated.—Previous treatment this year, as last, was conspicuous in most cases by its absence. One hundred and eighty-one teeth had been filled prior to the examination of the Schools Dental Surgeon. In addition, some extractions had been performed, the figures of which, however, are not at the moment available.

Details of Treatment.—1. Fillings.—The number of filling operations performed during the year was 1,061, and can be classified as follows:—

(a) Fillings in Permanent Teeth—	
Performed with local anæsthetic	256
Performed without local anæsthetic	579
(b) Fillings in Temporary Teeth—	
Performed with local anæsthetic	1
Performed without local anæsthetic	211
(c) Root Fillings	14

2. Extractions.—The number of teeth extracted was 964. They may be classified as follows:—

(a) Permanent Teeth—	
Extracted under local anæsthetic	166
Extracted under nitrous oxide	1
Extracted under general anæsthetic	19
(b) Temporary Teeth—	
Extracted under local anæsthetic	684
Extracted under nitrous oxide	—
Extracted under general anæsthetic	94

(c) Orthodontics.—Nine teeth were extracted to relieve crowding. Although it is not practicable, as was stated in last year's report, to carry out orthodontic treatment under existing conditions, except by extraction to relieve overcrowded mouths, a certain amount of collaboration has this year been possible between the Schools Dental Surgeon and private practitioners in the various centres he has visited. In this way, several children who needed appliances, etc., for orthodontic purposes were referred to them for treatment.

3. Anæsthetics.— General anæsthetics were administered by the District Surgeons in 22 cases. In only one case was nitrous oxide gas used. In the remainder of the cases local anæsthetics were employed.

4. Scaling.—Removal of salivary calculus by scaling was performed where necessary, and was followed by gum treatment if inflammation of the gingivæ was present to any appreciable extent.

5. Other Operations.—(a) Persistent *Frænum Labiæ*.—Division of the *frænum labiæ* under a local anæsthetic was carried out in one case in a child of pre-school age.

(b) Gingivectomy.—This operation was performed in one case, where severe ulceration of the periodontal membrane had caused "pocketing" in the region of the right mandibular premolars.

Gomohuru Leper Settlement.—During the early part of the year two visits were made to the above Settlement, to report on the dental condition of a patient. At the second visit the necessary treatment was carried out, consisting of the extraction of several teeth and of extensive scaling.

Cleanliness.—There is room for great improvement in cleanliness. To encourage children in oral hygiene, toothbrush inspections were made in the larger schools, and classes of instruction held in order to demonstrate the most efficient method of using a brush and of cleaning it after use. Much can be accomplished in improving dental cleanliness by this means, always provided that the Schools Dental Surgeon has the support and co-operation of parents and superintendents of hostels throughout the Colony. If this support is not extended, 90 per cent. of the benefit accruing from instruction classes is lost.

A child will not clean its teeth unless it is constantly supervised, and parents and others responsible must realise that if the teeth of their children decay through neglect, it is themselves who are to blame, and not their children.

Lectures.—Lectures have been given to both parents and children in the centres where sufficient people could be mustered. It is often difficult to stimulate the interest of parents in matters of hygiene, but with the help of the local hon. secretaries of the Rhodesia Women's Institutes, it has been possible to meet a number of parents in several of the larger centres.

In all, 9 lectures have been delivered—3 to parents and 6 to children.

CYRIL FLETCHER,
Schools Dental Surgeon.

Report of the Government Bacteriologist.

Staff.—Routine Division.—Government Bacteriologist, Senior Assistant, Apprentice Assistant and two native Laboratory boys. The Senior Assistant has now resigned, and a substitute is to be appointed.

Research Division.—Rhodesian Research Fellow, Research Entomologist, Junior Assistant (seconded), two native Laboratory boys, and four mosquito collectors stationed in suitable areas.

The Research Entomologist has applied for an Assistant and this is being considered, but as there is a possibility that he may cease work this year, this appointment may not be necessary. It would be a pity if his services were cut short before completion of his present investigations, and I hope that it may be possible to retain his services for another year at least. Indeed, in a Colony like Rhodesia where insect-borne diseases play such an important part in the public health of the country, an Entomologist on the permanent staff would be a great asset.

Chemistry Division.—Government Analyst and one native Laboratory boy, who also assists him to a certain extent. It is possible that by next year the work will have increased sufficiently to necessitate the appointment of an Assistant.

Clerical.—One typist. The typing and recording of letters and several thousand reports, entering up specimens and results, storekeeping and issuing requisitions for supplies, the care of the Library and periodicals, indexing abstracts of scientific literature, and other similar duties are carried out largely by the typist and partly by the staff generally, but as these duties increase yearly, they will in time require the appointment of a Clerk (acting as Storekeeper as well).

Pathology.—Reference to the figures given later will show that each year an increasing number of pathological examinations and *post-mortem* dissections are done. The number of both could be greatly increased with advantage, adding to our knowledge of the cases concerned and to the number of specimen slides (for instructional and other purposes) and of museum preparations. The Museum itself needs a skilled person as Curator for its supervision and for the selection and preservation of suitable specimens. Research into the pathology of various tropical diseases also would be of great value. In view of the above facts, I think that the appointment of a Pathologist will be advisable in the near future.

General.—During the year the furnishing of the eight rooms of the new upper storey was completed, providing much needed accommodation for the Research Entomologist and Government Analyst, and giving us as well a Museum, Storeroom, Library and rooms for Pathology and Medico-Legal work. There is a possibility of some bequest funds being granted which would provide an up-to-date Library and benefit the Museum as well. A good projecting lantern is needed for the purposes of lectures to doctors and the public and for meetings of the British Medical Association. The furnishing and equipment of the Laboratory, which has proved an expensive but necessary business, is now practically complete, except for two or three pieces of apparatus, the obtaining of which has been deferred as long as possible; and the yearly expenditure on the Laboratory will now be considerably less.

Annual Reports.—These are increasing in bulk and numbers, four being sent in by the staff this year. It will soon be advisable to issue the report for the whole Laboratory in separate form, as is done in other colonies which possess Government Laboratories. These Laboratories send us copies of their annual reports, and it would be a good thing if we could return the compliment. Our annual report could also be reviewed separately in the Tropical Diseases Bulletin, as is done in the case of other Laboratory Reports.

PASTEUR INSTITUTE.

There has been no undoubted rabies in Southern Rhodesia since 1913, but last year a suspected case was reported at Rusape, which on microscopical examination by the Veterinary Laboratory proved negative.

Four courses of treatment were supplied: one to a patient at Rusape, one to Port Herald, Nyasaland, and two to Livingstone, Northern Rhodesia. The fees for these four courses amounted to £21. Courses of treatment are made and stored throughout the year, whether required or not. In 1926, when rabies was more prevalent outside the Colony, twenty-one courses, amounting to £110 5s., were required.

PUBLIC HEALTH LABORATORY.

I.—ANALYSIS OF WORK DONE.

A. **Research.**—Separate reports have been made by Dr. Ross, who has been investigating blackwater and undulant fever; by Mr. Leeson, who is continuing his mosquito survey of the Colony; and by Mr. Facer, who was appointed Government Analyst in May for the purpose of chemical investigations and any necessary research. On the routine side little time is available and no definite programme can be followed out owing to the unavoidable interruptions, but whenever time permitted, research was carried out on points requiring investigation, and the results of these are given later under their respective headings. A bilharzia survey of school children is being undertaken by us this year, and reference to the figures given under this heading will show that this disease is of such importance that when the Research Fellow has completed his investigations in blackwater, I think that bilharzia should then have the next claim for investigation.

B. **Routine.**—(1) Routine Division.—The number of examinations shows a satisfactory yearly increase, the figures, which do not include any research work, being as follows:—

1923.	1924.	1925.	1926.	1927.
1,457	1,714	2,309	3,464	5,529

There has been no increase of the European routine staff during these five years, and, as I have pointed out, any addition that becomes necessary might take the form of a Pathologist.

The fees earned for the above examinations, Government and private, amounted to £2,545 0s. 6d., as compared with £1,527 0s. 3d. in 1926.

The specimens sent came from the following localities:—

Southern Rhodesia:	(1) Salisbury and district	5,130
	(2) Outside districts	393
Other Colonies ...	... ...	6

The numbers for outside districts (393) show a fair increase over the previous year (265), but this should be increased further, in spite of the difficulties in sending specimens so that they will keep during transit.

By sending special outfits to outside doctors, and by devising special methods, it is hoped to make it possible for more specimens to be sent. In this way we were able to arrange for a water supply in Nyasaland to be analysed by us.

The following table shows the methods employed in examination of specimens:—

	1926.	1927.
Bacteriological and Protozoological—		
Microscopical examinations	1,238	1,622
Agglutination tests	377	522
Preparation of vaccines	84	135
Decomplementising serum	3	...
Sigma tests	164	400
Cultural examinations	358	513
Examination of water supplies	31	41
Examination of sewage	1	1
Antiseptic co-efficients	2	3
Biologic tests	3	3
Helminthological (worm diseases)—		
Microscopical examinations	122	193

	1926.	1927.
Entomological—		
Identification of insects	1	2
Pathological—		
Microscopical examinations	536	1,062
Sections of tumours, etc.	114	158
Post-mortem dissections	22	105
Chemical—		
Various tests	338	655
Quantitative estimations	28	32
Biologic tests	5	...
Referred to Government Analyst	...	40
Medico-Legal—		
Various tests	36	42
Biologic tests	1	...
Total	3,464	5,529

(2) Government Analyst's Division.—To the above figures must now be added the routine investigations performed by the Government Analyst who was appointed in May. His work was handicapped at first by the equipment of his Laboratory being not completed, but later on he was able to begin regular work.

Eighty-three samples were examined by him, but, as he points out in his separate report, these numbers do not convey a real idea of the work done, for one "sample" may take a couple of weeks to examine, and another "sample" may consist of twelve separate specimens, each requiring two separate estimations. The examinations carried out by him were as follows:—

Bio-chemical	37
Toxicological	18
Waters	16
Drugs	4
Foods	3
Miscellaneous	5
Total	83

II.—REMARKS ON DISEASES, ETC., DEALT WITH.

A. **Blackwater Fever.**—The Research Fellow has continued his researches, and his results to date are contained in his report, which is published separately.

B. **Malaria.**—Here the Research Entomologist has continued his mosquito survey, and has collected and examined a very large number of specimens, and his results are contained in his report, which is also rendered separately. On the routine side 778 examinations for malaria were made by us, with 88 positives, 98 in 1926, and 102 in 1925, these figures showing a slight decrease. The positives were all malignant tertian, except one benign tertian in February, and were distributed as follows:—

	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
Examinations ...	73	59	63	72	132	46	56	33	40	65	54	85
Positives ...	6	8	15	11	27	8	4	...	...	5	2	3

Of the 5 positives in October, 4 were from one patient who had been living in the veld. The figures show the usual increase towards the end of the rainy season.

A drug called Smalarina was tested by us. This is stated to prevent relapses, and as the only way of proving this was to give it where re-infection was unlikely, it was given during the dry season. Two natives (Europeans not being available) were treated on alternate days for a month, the blood being examined, and also the urine occasionally. No relapses were noted during this period, or reported since then, but of course large figures are required for any opinion to be given. The tests will be continued this year at the proper time, but it is rather difficult to find cases during the dry season.

C. **Undulant Fever** (Malta Fever).—The Research Fellow has continued his researches into this disease, and here again there seems to be a diminution in the number of cases, giving less material for investigations.

Of 257 tests made by us, 15 gave positive results (22 in 1926 and 38 in 1925). The figures show no seasonal prevalence, so no table is given.

D. **Enteric Fevers.**—Three examinations of water supplies for *B. typhosus* proved negative.

Of 280 tests from patients, 39 were positive (43 in 1926 and 18 in 1925), and of these 28 were typhoid, 3 para-typhoid A, and 8 para-typhoid B.

They were distributed as follows:—

	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
Examinations ...	42	21	18	25	25	27	12	17	21	39	13	20
Typhoid	3	5	2	6	2	2	...	1	3	4	...	...
Para-typhoid A ...	1	...	...	...	...	...	...	1	...	1	...	...
Para-typhoid B ...	1	3	...	2	...	...	1	...	...	1	...	...

These figures, being fairly well scattered through the year, indicate sporadic cases rather than an epidemic, and are therefore unlikely to have been due to water or milk supplies. Sporadic cases, especially in a town with a bucket system, are usually due to carriers or recent cases, the infection being possibly carried by flies having direct contact with food or food vessels. To avoid such cases one generally searches for the carrier; and to avoid danger from flies it is best to treat the buckets in some way.

During the year some experiments were made which are recorded here as they have a bearing on this point.

Two chemical closets were tried at the Laboratory and examined bacteriologically and chemically. Both rendered the contents odourless and kept flies away, but in both cases the closet and chemical cost an appreciable amount, required some supervision, and the buckets supplied could not stand rough usage. They were considered well suited for outlying habitations, but not for adoption by municipalities. It was found by experiment that quite a small amount of finely sieved earth and slaked lime effectually abolished odour and kept flies away, and this method is so simple and inexpensive that it is suggested that some such system of treating sanitary buckets might be made compulsory in those towns where the bucket system of night soil removal is practised. If some such scheme were adopted one might see a diminution in the number of cases of fly-borne intestinal infections, such as enteric and dysentery.

E. **Dysentery** (Bacillary and Amœbic).—One hundred and sixty-eight examinations showed amœbæ to be present in 15 cases (13 in 1926). The remainder, either by culture or by the cells found on examination, appeared to be largely due to bacillary infection, though, of course, amœbæ are not always found in a single examination. The cases, of both kinds, were mostly scattered throughout the year, indicating sporadic cases, and the same remarks about prevention apply as those just made in the case of enteric. There seemed, however, to be a slight increase in cases of diarrhœa and dysentery towards the end of the year, which may have had some special cause such as water or food supplies.

F. **Intestinal Infections Generally.**—A large number of fevers of doubtful causation occur which are negative when tested for malaria, enteric, etc., and the probable nature of these has been gone into in previous reports. Methods of diagnosis, as they improve, will gradually explain these cases, and any research which improves our methods is of corresponding value. In these one often tries cultures (of blood or stools), and during the year we attempted to improve our methods of culture.

Two substances, telluric acid and brilliant green, have been stated to aid one in isolating typhoid or para-typhoid bacilli, and these were tested at different times during the year, 11 different intestinal organisms being tested, each upon 36 different mixtures of telluric acid and brilliant green with nutrient medium with the idea of finding an optimum medium for each organism. The results were promising and will be continued this year.

G. **Pneumonia and Influenza.**—A good many cases having occurred in different parts of the country, the question arose whether a new strain of pneumococcus, not contained in the stock preventive vaccine, was the cause. Some cases at Letombo and at the native hospital were studied, and in addition to the bacillus influenzæ and other catarrhal organisms the pneumococcus was isolated as well, both by cultures and by animal inoculation, and these strains were sent to Johannesburg for classification. They were reported as belonging to none of the recognised groups, and Sir Spencer Lister in a letter stated that the same conditions were being experienced in the Union, namely, that the original pneumococcus groups are becoming rare, and new strains becoming the common ones, and in his opinion the recent cases of pneumonia were secondary infections following on, or concurrent with, an influenzal infection.

H. **Cerebro-spinal Meningitis.**—Four cases occurred showing meningococci in the cerebro-spinal fluid. One unusual case occurred which showed these organisms in a body abscess before the disease had developed the usual cerebral symptoms.

I. **Tuberculosis.**—Two hundred and sixty examinations (sputums, sections, *post-mortems*) gave 64 positive results (40 in 1926 and 36 in 1925). The disease appears to be increasing.

J. **Leprosy.**—Fifty-eight examinations gave 10 positives in 5 cases (one European and four natives). A very unusual suspected case occurred in which no leprosy bacilli were found, but large numbers of diphtheroid bacilli were present in the skin, which normally shows no organisms. I have asked that this case be kept under observation, as leprosy bacilli have been stated sometimes to grow like diphtheroid bacilli in cultures, and if this case becomes one of leprosy later on, it will be of great interest and some importance.

K. **Diphtheria.**—One hundred and fourteen tests gave 23 positives in 10 cases, who were re-examined until negative; 7 of these cases were in Salisbury, 1 Melsetter, 1 Gwelo and 1 Umvuma. Three animal inoculations were made in one case to verify the fact that the bacilli were still virulent. This case was of some interest, as virulent bacilli persisted in the throat for a great many months after the patient was apparently well. These carriers can easily infect others, and for this reason no patient is discharged until several examinations have proved absence of infection.

L. **Venereal Diseases.**—(a) Syphilis.—As a result of the previous year's examinations of 200 natives, which showed that 16.5 per cent. of unsuspected natives showed latent syphilis or yaws, a large number of healthy natives, chiefly police recruits, are now examined annually, in addition to the ordinary suspected cases, and last year 409 sigma and other tests were made, giving 55 positives, as compared with 42 in 1926, the increase being mainly due to larger numbers being examined.

(b) Gonorrhœa.—One hundred and forty-two examinations gave 65 positives (30 in 1926), but some of these were re-examinations of the original cases, to see if they were still infective.

M. **Schistosomiasis** (Bilharzia).—One hundred and thirty-three examinations gave 49 positives (33 in 1926 and 18 in 1925). A good many years ago I found that a large number (over 30 per cent.) of natives generally were infected; and as regards Europeans we have begun (this year) the examination of a large number of school children, and so far 7.5 per cent. have been found infected, showing that the disease is unpleasantly widespread. A popular pamphlet, on the lines of that published in the Union, is being drafted calling the attention of parents and others to the importance and prevalence of this disease, and stressing the fact that it is not only curable and should be cured at once, but that it is also preventable to a large extent. Something might be done here by Native Commissioners, if they could advise natives how to avoid infection and how to prevent infection of streams. I am of the opinion that a general survey of the prevalence of this disease, the disease areas and methods of prevention should be taken at an early date.

N. **Other Worm Infections.**—Eighty-one examinations (of blood, stools, etc.) were made for various worm infections. No filariæ were found. One examination for paragonimus was negative. Strongyloides were found once, and ankylostomes a few times. The G.M.O., Salisbury, has reported an interesting connection between ankylostomiasis (hookworm disease) and some of the cases of swollen legs which are so common among natives, and which are often as mysterious in origin as they are intractable in treatment.

O. **Trypanosomiasis.**—Eleven examinations for suspected sleeping sickness, all negative.

P. **Other Diseases.**—A few cases of scalp and body ringworm. Two cases of infection with Vincent's organisms (causing throat conditions, tropical ulcers and probably bronchial spirochætosis). Typhus fever, one negative. Leishmaniosis, three negatives. Piroplasmosis, one negative. One case of infection with giardia (lamblia).

Q. **Pathology.**—One thousand and sixty-two microscopical examinations (536 in 1926), 158 sections of tumours (114 in 1926), and 105 *post-mortem* dissections (22 in 1926) were made. The microscopical examinations were mainly of urines, stools, blood and other body fluids. The sections and *post-mortems* showed the following diseases:—

(1) Infections—	
(a) Inflammation (appendicitis, nephritis, etc.) ...	52
(b) Tuberculosis	15
(c) Pneumococcal infections (one meningitis)	46
(d) Pleurisy and empyema	5
(e) Meningococcal infections (one abscess)	5
(f) Septic meningitis	4
(g) Enteric fever	3
(h) Dysentery	4
(i) Syphilis	7
(j) Malaria	2
(k) Bilharzia (2 appendix, 1 pancreas)	4
(l) Hydatid disease	1
(m) Heart disease	7
(2) Degenerations, Necrosis, etc.—	
(a) Gangrene (2 spleen)	3
(b) Completely atrophied spleen	1
(c) Cirrhosis	2
(d) Ulcers	2
(e) Strangulated hernia	1
(3) Abnormal Functions, etc.—	
(a) Hypertrophy	1
(b) Goitre	4
(c) Pigmentation	1
(d) Puerperal	1
(4) Accidental Causes—	
(a) Hæmorrhage	2
(b) Injuries	12
(c) Poisoning	1
(5) Tumours, Cysts, etc.—	
(a) Malignant—Carcinoma	24
Sarcoma	11
Gliosarcoma	2

(b) Non-malignant—		
	Papilloma	7
	Cysts	5
	Myoma	2
	Fibro-adenoma	1
	Lipoma	2
	Angioma	1
	Myxo-fibroma	1
	Keloid	2
	Osteoma	1

R. **Water Examinations.**—The Salisbury municipal water supply was examined regularly every month and gave satisfactory results. Nineteen different local supplies (dairies, etc.) were also examined for contamination or actual enteric germs, and 2 samples were sent from the Makabusi River. A well at Bindura, 2 samples from the Bulawayo Swimming Baths, 4 samples from Umtali, 1 from Chilimanzi and 1 from Selukwe were examined.

Alumino-Ferric.—In the Salisbury municipal supply alumino-ferric is added prior to filtration, and this substance causes a very rapid sedimentation of organisms and suspended matter, and so aids greatly in the purifying process. In our examinations of the municipal water we obtained somewhat peculiar results in our bacterial counts, and thought this might be due to minute traces of alumino-ferric which had possibly passed through the filters. We therefore obtained some of the chemical and tested it as follows:—

(a) Sedimenting power.—Four hundred million organisms (*B. coli* and others) were added to a little water (10 cc. in a test tube) containing various strengths of alumino-ferric, and after an hour the upper layers of the fluid were tested. No organisms were found in this upper layer of the tubes containing the chemical in a strength of 1/100 or 1/1000, and there was definite sedimenting power in even higher dilutions. This result was striking, and showed that the precipitation of organisms to the bottom was very complete.

(b) Germicidal power.—The above tubes were well shaken up after 24 hours and tested for living organisms. They were found to be killed in strengths up to 1/10,000, so there is also a definite germicidal power in the substance.

(c) Power of preventing growth.—A mixture of organisms with varying strengths of the chemical was added to nutrient medium and the results noted. No growth at all occurred in a dilution of 1/10,000, and there was preventive action in 1/100,000 and even higher dilutions. This result shows that if too much of the chemical was added prior to filtration, and if some passed through the filters, it would tend to falsify our tests for organisms to some extent. It is intended to test the town water from time to time for the presence of this chemical, and also all samples before analysis, so that this fallacy can be allowed for. It is unlikely that sufficient chemical could pass the filters to cause any digestive disturbances by the sulphate contained in it.

S. **Chemical.**—These comprised various chemical tests and quantitative estimations carried out on urine, blood and other body fluids, and totalled 687 (371 in 1926). In addition, 40 specimens were handed to the Government Analyst for tests requiring his special knowledge or special apparatus.

T. **Medico-Legal.**—Forty-two tests for blood and other stains in murder and assault cases.

III.—STATEMENT OF FEES EARNED.

(a) **Pasteur Institute and Routine Division.**—The fees classed below as "Government" represent work done for patients in hospital, Police, paupers, natives and any Government work. "Private" represents work done for private patients outside hospital, and vaccines for private patients.

	1926.			1927.		
	Private.	Government.	Combined.	Private.	Government.	Combined.
	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.
Pasteur Institute	110 5 0	...	110 5 0	21 0 0	...	21 0 0
Routine Division	427 3 3	1,099 17 0	1,527 0 3	495 8 6	2,049 12 0	2,545 0 6
Total	537 8 3	1,099 17 0	1,637 5 3	516 8 6	2,049 12 0	2,566 0 6

(b) **Government Analyst's Division.**—The scale of charges for the Government Analyst's work is still under consideration, and only a few fees are charged for private work. The Government work is generally of the nature of research or other highly specialised work, and it is not possible to refer to it in terms of revenue. The appointment of a Government Analyst has saved considerable expenditure in retention fees and other charges.

(c) **General.**—It will be seen that each year there is a tendency to increase the gratuitous work, and to charge less to private patients, and in 1927 only 20 per cent. of the work was actually charged for. At present patients in Government hospitals and an increasing number of other persons, school children, venereal cases, etc., pay nothing except for vaccines.

It would be unwise to carry this principle further, as there is no reason why patients who benefit directly from the work of the Laboratory should not pay something towards its upkeep, nor is there any reason why the general public, who do not benefit directly, should pay more than their fair share.

An increased amount might be earned by the Laboratory by the revision of the charges made, though it is not possible at present, nor perhaps desirable, to attempt to make it altogether a self-supporting institution.

L. J. JOHN ORPEN,
Government Bacteriologist.

Report of the Government Analyst.

The Government Analyst assumed duty on 16th May, so that the period under report is seven and a half months. In the earlier stages a considerable amount of time was spent in the preparation of stock and standard solutions, assembling and testing permanent apparatus, and in completing laboratory fittings.

Samples Analysed.—During this period 83 samples were accepted, and, with the exception of one or two cases in which preliminary examination and consideration of the circumstances indicated that thorough chemical analysis was not warranted, were analysed and reported upon. In this connection it may be observed that the number of samples analysed, though an interesting item in a report of this nature, is misleading as a criterion of the work done. Thus a "test meal" which is recorded as one sample actually comprises from ten to twelve samples, on each of which two separate estimations are performed, yet the amount of work involved therein is relatively small as compared with that necessary in the investigation of an obscure poison case, or the analysis of some patent drug, disinfectant, etc. The analysis of one sample may take two or three hours, whilst complete investigation in another case may take a week or more.

The samples submitted may be grouped as follows:—

Bio-chemical (submitted through the Government Bacteriologist).—There were 37 of these, comprising:—

6 samples of blood (for sugar).
2 samples of cerebro-spinal fluid (for sugar, globulin and colloidal gold curve).
2 samples of stools (for fat).
19 samples of urine (6 for phenol, 13 for antimony and arsenic).
8 samples of test meals (for total and free acidity curves).

Toxicological.—There were 18 of these, comprising:—

9 samples of stomachs and viscera.
5 samples of roots, etc. (not analysed).
1 sample of powder.
3 suspected vessels.

Water.—There were 16 of these, comprising:—

3 samples of distilled water for Government Departments.
6 samples of drinking water for Government Departments.
5 samples of drinking water for individuals.
2 samples of river water for the Salisbury Municipality.

Drugs.—There were 4 of these, comprising:—

1 sample of chloroform.
2 samples of quinine.
1 sample of codrenine.

These analyses were conducted on behalf of the Medical Department.

Foods.—The samples analysed comprised:—

2 samples of butter.
1 sample of condensed milk.

Miscellaneous.—There were 5 of these, comprising:—

1 sample of brewer's pitch.
1 sample of septic tank effluent.
1 sample of Wembley closet disinfectant.
1 sample of food preserver.
1 sample of rock (from a well under investigation).

Remarks on the Above.—Bio-chemical.—The application of chemical methods in the study of pathological conditions has become an important factor in diagnosis in recent years, and the performance of this work in a laboratory near to the hospital assists the medical profession and benefits the public.

Toxicological.—Two of the samples submitted were in connection with Europeans, and comprised a stomach in which no poison was found, and a sample of powder procured from a subject who thought it was ground glass administered with criminal intent, but which proved to be finely divided sand, possibly derived from the water consumed.

The remaining samples were in connection with native cases, and in six of them positive results were obtained, the poison found in each case being arsenic.

The services of the Government Analyst as a toxicologist have not only been of use in performing investigations where such appeared desirable, but his discrimination in deciding not to conduct long and expensive analyses for "obscure native poisons," unless the circumstances afforded a reasonable basis of work and chance of success, has meant a considerable saving to the State.

In connection with "native poisons," no progress can be recorded. This region can only be illuminated by careful research, for which the small portions of putrid stomachs which have occasionally been received are useless material. The South African Botanical Survey has just published "A Preliminary List of Known Poisonous Plants in South Africa." A copy has been obtained and will probably prove useful, but it is hoped that before long it may be possible for the Native Department, the Government Botanist, the Government Analyst, and any others who may be qualified to help, to co-operate in investigating to what extent "native poisons" merit serious attention in this Territory.

The Analyst attended one High Court Session at Bulawayo under subpœna. In connection with the Government Analyst giving evidence in criminal proceedings, the recent modification in our laws whereby, subject to the consent of the accused, the "affidavit" reports of the Analyst are accepted as valid evidence in the lower and higher courts without his attendance in person, is a very beneficial innovation, as it not only saves a considerable amount of money in fares and allowances, but it obviates the necessity of the Analyst being frequently called from headquarters. This is important, as he has no assistant to deal with urgent samples during his absence.

In view of the above, it can be stated that during the period under review considerable improvements have been effected in the procedure in cases of suspected poisoning.

General.—A certain amount of correspondence of advisory nature has been dealt with. It will be apparent that, apart from analytical work, there are many occasions on which a chemist may, in an informal manner, be of assistance to his colleagues in an establishment such as the Public Health Laboratory, as there are many occasions when they can be of assistance to him.

A. W. FACER,
Government Analyst.

Report of the Rhodesian Research Fellow.

The Public Health Laboratory,
North Avenue, Salisbury,
13th March, 1928.

The Medical Director,
Salisbury.

I have the honour to submit a report of the work done by me as Rhodesian Research Fellow for the year 1927.

Blackwater Fever.—(a) Statistics.—The Medical Department received notification of 42 cases of blackwater fever; in only 36 of these form 28 A was available. The statistics are, therefore, limited to those cases in which the necessary form was forwarded.

Number of cases	36
Number of deaths	13
Seasonal Incidence—	
January	6
February	2
March	10
April	4
May	4
June	5
July	...
August	...
September	2
October	...
November	2
December	1

Incidence of death according to sex—

	Cases.	Deaths.
Males	30	11
Females	6	2

Incidence according to age group—

1- 9	2
10-19	2
20-29	12
30-39	6
40-49	11
50-59	3
60 and over	...

The percentage death rate shows a slight increase, being 36.1 per cent., as compared with 27.5 in 1926 and 26.1 in 1925. The following information is also of interest. In 20 cases the attack was the first, in 10 cases there had been one previous attack, in 3 three previous attacks, in 1 four; in 1 the number of attacks was not stated, and in 1 no information was given.

Thus 33 per cent. of cases this year were in people who had previously suffered from the disease, as compared with 37 per cent. and 43 per cent. in 1926 and 1925 respectively.

In the 13 fatal cases, in 7 the attack was the first, 4 had had one previous attack, 1 had had 3 attacks, and in 1 no information was given.

The longest period elapsing between two attacks of the disease is given as 20 years, while the shortest period recorded during the last three years is one month.

Information as to the duration of the disease in fatal cases is available in 12 of the 13 cases. In 4 the patient died within 24 hours, in 2 within 48 hours, and 2 within three days, while the 4 remaining cases lasted 4, 6, 10 and 21 days respectively. The cause of death is given in 4 as suppression of urine, in 4 toxæmia, in 1 cardiac failure, in 1 anæmia, in 1 anæmia and gastro-enteritis, and in 1 as septicæmia, due to gas gangrene occurring at the site of a subcutaneous inoculation.

(b) Research Work.

(i.) Biochemical.—A statement on the increased amount of bilirubin present in the serum of blackwater fever patients and on alterations in various nitrogenous constituents of the blood was made in last year's report. These results are now in process of publication in more extended form in technical journals, and no additional statement is necessary on this occasion.

During the past year attention has been devoted to such constituents as the blood calcium and cholesterol, and the results obtained indicate that no alteration which can be regarded as a specific feature occurs during the course of blackwater fever.

The factors responsible for the occurrence of suppression in certain cases of the disease have been investigated in the light of an important deduction drawn by Baker and Dodds from results obtained in cases of transfusion hæmoglobinuria, and from experiments on animals.

These observers consider that blocking of the renal tubules with hæmoglobin is dependent upon two factors, namely, the acidity of the urine and the concentration of inorganic salts, principally chlorides. Thus, if hæmoglobin be introduced into the circulation and excreted by the kidneys, two things may happen. If the acidity of the urine be represented by Ph. 6 or over, the hæmoglobin is excreted as oxyhæmoglobin and there is a little tendency to suppression. If the acidity be below this, methæmoglobin or hæmatin is formed, and this in the presence of a sufficient concentration of inorganic salts precipitates in the tubules and so causes suppression.

In vitro experiments in Rhodesia have confirmed their contention, but experiments on patients suffering from the disease suggest that other factors may enter into the problem. In the first place, it has been found that methæmoglobin as well as oxyhæmoglobin may be present in the blood stream; and, further, the concentration of chlorides in the urine is usually below the figure suggested by Baker and Dodds as necessary for precipitation. Further studies on this problem are being made.

(ii.) Serological.—Experiments have been conducted with a view to defining the nature of the hæmolysin present in blackwater fever. These have been of an extremely technical nature, and in a general report of this kind it is not proposed to enter fully into details. It is sufficient to say that up to the present results have been of a negative character, and are to a large extent confirmed by results obtained by Kilkuth working at a Hamburg School of Tropical Medicine. Further experiments on this most important subject are contemplated, for until the hæmolysin is defined, we shall only be able to advance hypothetical explanations of the disease.

(iii.) Therapeutic.—Investigations were made during the year on the value of certain new compounds which have been recommended as efficacious in the treatment of malaria. The fact that certain cases of blackwater fever seem to be precipitated by quinine makes an alternative to that remedy most desirable, and special attention has been given to the treatment of malignant tertian malaria by the newer drugs in such susceptible patients. The drugs investigated comprise plasmochin, peracrina and toxotropin. Results obtained with the last two in preliminary trial did not warrant a continuance of their use, but the value of plasmochin has been thoroughly investigated. Its use in uncomplicated malignant tertian infection is disappointing, in that while it can effect an action on the asexual forms of the parasite, that effect is only transient, and asexual forms invariably re-appear. It has, however, a marked effect on the gametocytes, which are unaffected by quinine, and its value in respect of this property is considerable. In quinine susceptible patients suffering from acute malaria of this type its effect has, as in uncomplicated cases, been only temporary, and in two quinine treatment became necessary and was followed by blackwater fever. This plasmochin does not influence the tendency of quinine to precipitate blackwater fever in these cases. It had also no effect on post-hæmoglobinuric pyrexia. It is necessary at this point to emphasise the fact that plasmochin treatment requires careful supervision. It should not be used in doses greater or for periods longer than advised in the literature, since several cases have developed cyanosis and methæmoglobinæmia as a result of overdosage.

These objections to plasmochin have been recognised by the manufacturers, who now offer a mixture of plasmochin and quinine, called "Plasmochin Compound," for the treatment of malignant tertian malaria. It is stated to be less toxic and more efficacious, but no opportunities have been available to test this new compound in Southern Rhodesia.

As regards the treatment of declared cases of blackwater fever, no radical advance has been published during the past year. The value of blood transfusion, however, has been emphasised in hæmoglobinuric conditions, and that with oral or intravenous alkaline treatment of the less severe cases is probably the most rational procedure at the moment. The new diuretic, "Novarsurol," was tried in one case of suppression without result.

(iv.) General.—Mr. H. S. Leeson, the Research Entomologist, reports separately upon his work for the year. His survey of the mosquito distribution throughout the country has an important bearing on blackwater fever research, and has led to an intensive enquiry into the bionomics of the various anopheline mosquitoes being commenced at Shamva, a notorious district in the annals of the disease.

The general position of the research work done on blackwater fever during the last three years may be epitomised by saying that all evidence—statistical, clinical and scientific—points towards the association between the disease and malaria. The actual existing cause of the catastrophe of blackwater fever remains obscure up to the present, in spite of all our efforts. At the same time we are not sterile in suggestion. It has been emphasised before that our methods of successful attack on the disease must be an attempt to secure its prevention. When once the disease is established, it is extremely doubtful if any therapeutic procedure will ever succeed in obtaining invariably successful results. The years and the money that have been devoted to this particular research have produced a declaration of faith on the part of those responsible for the conduct of the research, namely, that the disease cannot exist without previous malarial infection, and that the elimination of blackwater fever depends upon the elimination of malaria. Every consideration demands that that faith be put to the test. It is not to be refuted by the vocal denunciation of those who on personal or hearsay grounds believe to the contrary. It is a concrete thing that can be proved or disproved, and it devolves upon every citizen of the country to play his or her part in the experiment. The elimination of malaria is not a work of superhuman difficulty. It has been done repeatedly under conditions far less favourable for its success than exist in Southern Rhodesia. Dr. Thomson, my predecessor, writes in his report on the disease in this country:—"I am certain that if breeding places of anophelines were destroyed or avoided, houses well built and thoroughly screened, efficient mosquito nets used and attacks of malaria properly treated with quinine, blackwater would disappear entirely."

None of these requirements are things that it is impossible to do. A recent paper by Mr. Leeson, which has been circulated widely through the country, tells in simple language how to recognise and destroy the disease-carrying anophelines at all stages of their development. The other requirements are essentially the duty of the individual, and unless individual interest is obtainable, there is a gap in our encircling movement through which the enemy may slip. If such a comprehensive scheme of attack were instituted and carried through with the thoroughness which it demands, the necessity for a blackwater fever research station in Southern Rhodesia would soon disappear.

Undulant Fever.—The work which has been done on this disease during the year under review was limited to that necessary to complete previous experiments, and the results obtained have been published in various papers, as shown under the heading of publications.

Pseudo-Typhus.—Further observations have served to establish the disease as a clinical entity and to confirm the belief that it is due to an ultra-microscopic virus.

General Investigations.—In collaboration with the Director of Veterinary Research, blood chemical investigations were made of a series of animals suffering from piroplasmosis and anaplasmosis. A detailed report of these experiments will appear later.

Reports of an analysis of a local plant, "Dicoma Gerrardi," reputed to have curative properties in malaria, were received from Dr. T. A. Henry, of the Wellcome Research Bureau. Analysis failed to reveal the presence of an alkaloid comparable to quinine, but clinical trial of an alcoholic extract of the plant was advised.

Publications.—The following papers have been published during the year:—

(1) F. E. Robinson: A Note on the Serological Identity of Rhodesian and American Strains of *Br. abortus* from Human Sources. Journal of the Medical Association of South Africa. 10th September, 1927.

(2) G. R. Ross, in collaboration with A. Paton Martin: The Treatment of Undulant Fever by Mercurochrome -220. Journal of Tropical Medicine and Hygiene. 1st July, 1927.

(3) G. R. Ross: The Agglutination Test in Undulant Fever due to *Brucella abortus*. A preliminary note on the value of the "Abortoscope." Transactions of the Royal Society of Tropical Medicine and Hygiene. Vol. 21, No. 1, pp. 57-62. July, 1927.

(4) G. R. Ross: The Value of Non-Specific Agglutination in the Differentiation of the Genus *Brucella*. The Journal of Hygiene. Vol. 26, No. 3. 10th August, 1927.

(5) G. R. Ross: A Serological Study of Undulant Fever in Southern Rhodesia. The Journal of Hygiene. Vol. 26, No. 4. 18th October, 1927.

(6) G. R. Ross: Alternative Treatment of Malignant Tertian Malaria in Quinine Susceptible Patients. The Journal of Tropical Medicine and Hygiene. Vol. 30, No. 20. 15th October, 1927.

(7) G. R. Ross: The Bacteriology of Contagious Abortion of Cattle and Undulant Fever in Man. South African Journal of Science. Vol. 24, pp. 282-288. December, 1927.

(8) G. R. Ross: Bilirubinænia in Malignant Tertian Malaria and Blackwater Fever. British Journal of Experimental Pathology. No. 6, Vol. 8. December, 1927.

GEO. R. ROSS,
Rhodesian Research Fellow,
London School of Hygiene and Tropical Medicine.

Report of the Research Entomologist.

Public Health Laboratory,
North Avenue, Salisbury,
19th March, 1928.

The Medical Director,
Salisbury.

I have the honour to submit herewith report of work on the anopheline mosquitoes of Southern Rhodesia for year ended 31st December, 1927.

General.—The staff employed consisted of four native mosquito collectors and one native laboratory boy. The original plan of work was continued till October. The four collectors were stationed respectively at Sinoia, Bindura, Shamva and Gatooma. All town and village management boards received Circular No. 21 asking for their co-operation in the mosquito survey. All those sending favourable replies received outfits for collecting mosquitoes in all stages. This scheme of voluntary collectors did not meet with the success desired, with the exception of Umtali.

The greatest obstacle to progress till May was the lack of proper laboratory accommodation; this drawback, however, has now been rectified, and the present laboratory is in cheerful and decided contrast to the cramped quarters available from September, 1926, to May, 1927.

Scheme of Work.—(1) Correlating special species of anopheles breeding places with cases of blackwater fever.

(2) If any special species of anopheles is associated with this condition.

(3) If this species is merely the most potent carrier of malaria.

After the original survey lasting till October the scheme was modified somewhat. The collectors were re-arranged. Two were appointed to Shamva district and two to Salisbury district, so that data could be obtained regarding a blackwater area and a non-blackwater area. This arrangement existed for the remainder of the year.

The following are notes of the data obtained from the results of investigations, comprising the geographical distribution of species to end of the year, the seasonal prevalence, and the habits, life cycle and breeding places of mosquitoes.

A. **Anopheles Costalis.**—(1) Makes its appearance in this country from late November to early June, coinciding with the rains.

(2) Breeds in puddles along river banks, cattle feet marks, irrigation canals, seepage from these, drains, and prefers water exposed to sunshine.

(3) The adult has been taken in occupied European houses and native quarters.

(4) The information to date suggests that this mosquito does not hibernate. With the advance of the colder dry weather it is killed off.

B. **Anopheles Funestus.**—(1) Can be collected through the entire year, but only active during November to April.

(2) Breeds in shady, still pools and ponds with muddy bottoms, and quiet shady parts of streams.

(3) The adult has been taken in the same situations as *anopheles costalis.*

(4) Hibernates in adult stage under stones in damp situations such as along river beds.

C. **Anopheline Prevalence in Relation to Blackwater.**—Two species are constant in all blackwater areas during the blackwater season, *anopheles costalis* and *anopheles funestus.* The appearance of *anopheles costalis* coincides with the period when blackwater fever cases occur most frequently.

When possible, dissections of female anopheline mosquitoes have been made and stomachs and salivary glands examined for zygotes and sporozoites of malaria. No infected mosquitoes were observed during the year.

An analysis of the dissections is as follows:—

Species.	No. of females.	No. of microscopical preparations.
An. costalis	76	102
An. funestus	78	118
An. pretoriensis	62	70
An. rufipes	45	80
	261	370

Miscellaneous.—A. Mosquitoes found with organisms, other than malarial parasites, in salivary glands or stomachs:—

	Specimens.	Microscopical preparations.
Culex	4	8
Aedes vittatus	2	4
Anopheles pretoriensis	9	22
Anopheles rufipes	6	11

B. Maps of Southern Rhodesia have been constructed showing distribution of blackwater fever in its relation to malaria, rainfall and temperature.

C. Charts showing the relationship between blackwater fever, malaria, *anopheles costalis, anopheles funestus* and meteorological conditions.

D. Photographs of breeding places and "blackwater houses" have been prepared.

E. Lectures and papers were read as follows:—Shamva Farmers' Association, Shamva; Wesleyan Church (twice), Salisbury; South African Association for the Advancement of Science, Salisbury meeting; Rhodesia Scientific Association, Salisbury.

As a result of the lecture and demonstration before the Rhodesia Scientific Association, 5,000 pamphlets have been issued and distributed throughout the country in blackwater areas.

F. Frequent visits have been made to various localities for the purpose of studying local conditions in the more notorious blackwater areas.

G. Identifications of mosquitoes have been made for town and village management boards and private individuals.

H. The thanks of the Department are due to the London School of Hygiene and Tropical Medicine, and to G. H. E. Hopkins, Esq., Medical Research Laboratory, Nairobi, for specimens of named anophelini.

H. S. LEESON,
Research Entomologist.

Report of the Medical Superintendent, Ingutsheni Mental Hospital.

I have the honour to submit my report for the year ended 31st December, 1927.

On the 1st January, 1927, there were 232 patients on the register. During the year 63 were admitted, 34 discharged and 20 died. Two hundred and ninety-five cases were treated, that is, 46 male Europeans, 18 female Europeans, 190 male natives and 41 female natives. There remained in residence on the 31st December, 1927, 240 patients, *i.e.*, 37 male Europeans, 12 female Europeans, 155 male natives and 36 female natives. One coloured male patient was absent on probation.

The cases admitted included three re-admissions, all male natives. Twenty-nine were discharged recovered, three discharged unrecovered but relieved, one voluntary boarder relieved, and one transferred to the Union unrecovered. Probation was allowed in three instances; one recovered, one was brought back and one remained absent at the end of the year. Greater advantage could be taken of the system of probationary discharge but for the great distances, which make it impracticable in many cases.

Of the European patients remaining at the end of the year, 11 were born in England, 8 in Scotland, 4 in Ireland, 16 in the Union of South Africa, 5 in Rhodesia, 1 in New York, 1 in Egypt, 1 in Russia, 1 in Poland and 1 in Australia.

Of the natives remaining, 75 were born in territories outside this Colony. During the year three Europeans were admitted under less than twelve months' residence in this country. Liability for the upkeep of these was accepted by the Union Government. Captain Brundell, the Chief Immigration Officer, informs me that two immigrants were refused entry into Rhodesia on grounds of mental infirmity.

Eleven escapes occurred during the year. These refer to six patients, two European and four natives. All except one native were taken within the statutory period, and as this patient was a Governor's pleasure lunatic, the existing authority allowed of his return although absent beyond the 28 days, which in the case of an ordinary patient would require action under Regulation 3, discharge by escape.

Seclusion and restraint had to be employed in the case of eight Europeans and eleven natives for periods ranging from one hour to fifteen hours. The chief reasons for restraint and seclusion were for attacks of epilepsy, homicidal tendencies and irrepressible impulses. In the case of one European, restraint had to be resorted to on nineteen occasions to prevent self-mutilation.

The recovery rate per centum, calculated on the number of patients admitted, was 46.03, as against 34.78 for the previous year. The death rate, calculated on the number treated, was 6.77, as against 7.94 in 1926.

Of the number of patients under treatment, there is an increase of congenitally defective types.

The number of melancholic and stuporose types is also on the increase. It would therefore appear that for some reason the forms of insanity are becoming less amenable to treatment, and a larger residue of utterly hopeless and incurable cases remain over each year. This state of affairs may be due to the larger accommodation available than to the measure of increase in the less hopeful forms of insanity, and perhaps to old standing cases of mental deficiency and insanity being certified as recent ones.

In my report last year I referred to the relatively low number of cases of general paralysis of the insane among the patients in this Hospital, and I am glad to state that at present there is an entire absence of this grave physical and mental disorder.

The chief causes of the insanity of the persons admitted were hereditary influence, intemperance and drink, worry and trouble and previous attacks. Worry and troubles of some kind or other could be assigned as a contributing cause of the mental breakdown of many cases of insanity amongst natives, and with their belief in witchcraft and distrust of each other, it is not to be wondered at that they have exaggerated and coloured mental vision, which no doubt contributes to their mental breakdown. There is, however, a large reduction of the number of the natives insane whose condition can be attributed to the use of "daka," Indian hemp.

It is gratifying to report another year free from serious accidents. A few minor accidents inseparable from a place of this kind were recorded, but none has occurred of such a nature as is regarded as characteristic of hospitals for the insane.

Both the European and native male divisions were overcrowded at this time last year. Additions and alterations completed during the year have provided more accommodation for Europeans, and further accommodation for native males, I hope, will be provided soon which will meet all requirements for some years to come.

I need hardly say that the additional accommodation already provided has been an incalculable benefit to the patients and staff. There is a great improvement in this institution on last year, and it will, I hope, with the further improvements asked for, in a short time compare favourably with similar hospitals elsewhere.

The farm, garden and dairy continue to show satisfactory results. I am glad to record the grant of additional land, which was long promised us. Occupation is one of our most valued forms of treatment, and I welcome the additional land as a means of congenial employment for the native patients.

The road to the Asylum is in urgent need of repairs, and I am informed that negotiations with the Bulawayo Council were begun with a view to putting the road in order, but, unfortunately, these broke down on the question of the allocation of costs. I must again ask for earnest consideration of this matter; the road is bad, but the drift is the crux of the trouble, as in rainy weather it is on many occasions quite impassable. As there is no resident medical officer at Ingutsheni, I feel that the place should be reasonably accessible to me at all times, and in any kind of weather.

There are two minor matters of a social nature which might receive attention some time in the near future, namely, (1) the appointment of official visitors, (2) and an arrangement whereby regular visits from clergymen of one or more denominations could be assured. Fairly regular visits by the Archdeacon and the Catholic Fathers used to suffice, but such visits are less frequent, and it would seem that a large institution like this should have these amenities as a matter of course.

The nursing staff has been kept up to strength, and no change of any importance took place during the year. Two members, a male and female nurse, were dismissed for conduct calculated to have a bad effect on weak-minded patients.

The new female divisions under the care of the nurse-matron have run smoothly, and I feel that she deserves praise for the conscientious and efficient manner she has arranged the wards and staff under her.

As regards cost, the hospital has been efficiently and economically managed. After a year's trial with treatment of female patients, I am pleased to be able to report that this department has not appreciably increased the cost per head, and that the fact of patients receiving early and direct treatment had resulted in the most happy results. Of the number of first attacks admitted during the year into the European female wards, all recovered and were discharged.

Revenue from paying patients and sales of surplus products amounted to £1,925 19s. 8d., *i.e.*, maintenance fees, £1,756 19s. 8d.; sales, £169 18s. 8d.; supplies from the farm and garden amounted in value to £783 5s. 3d. There was outstanding from earnings £534 13s. at the end of the year, as against £430 3s. on the 31st December, 1926. The total expenditure for the year, including value of farm and garden produce, was £8,716 1s. This works out at £36 18s. 8d. per patient per annum.

The cost of maintenance calculated on gross expenditure is 2s., and the cost per diem, excluding produce, is 1s. 10d. The net cost to the Government, after deducting revenue from Hospital Vote of expenditure, was 1s. 4½d.

F. H. ELLIS,
Medical Superintendent.

Report of the Board of Inspection on the Gomoburu Leper Settlement.

The board comprised the Acting Medical Director, the Superintendent of Natives, Victoria Circle, and the Government Medical Officer, Fort Victoria.

One hundred and fifty-five male lepers and 65 female lepers were examined. These numbers appear smaller than those of the 1926 board, due to the fact that a new list is being prepared, and all those lepers who have died and who have been discharged and who have deserted have been omitted from this new list. There are 63 male lepers and 6 female lepers under treatment, *i.e.*, receiving injections of hydrocreol, and the majority are benefiting greatly. Most of the lepers are anxious to have the injections, a complete change over from their attitude of a year or two ago.

The board discharged on probation 6 male and 3 female lepers. These will be seen by the Government Medical Officer, Fort Victoria, every three months. Three males and one female were born in the Settlement during the year, and two of those born in 1926 were sent away. Fifty-two males and 17 females were admitted during the year—double the number admitted during any previous year. The striking point about these admissions is the number of voluntary ones, showing that the recent improvements in the way of a new site, treatment, etc., are appealing to the native. Twenty-one men and 8 women died during the year, and 15 men and 4 females deserted. This latter number is rather large, but 75 per cent. of those who deserted were foreign natives, who always take a longer time to settle down.

There were no complaints, and the lepers seemed very happy and contented, and are busy making new gardens, etc.

The new house for the Superintendent is almost finished, and the hospital and dressing room are being built at the same time.

The Settlement is completely fenced, and in a few years this unit should be practically self-supporting.

A. J. MACKENZIE,
Acting Medical Director.

C. L. CARBUTT,
Superintendent of Natives.

P. H. HENSON,
Government Medical Officer.

PART III.

ESTABLISHMENT.

The establishment as authorised during the year 1928 was as follows:—

Medical Director, Medical Inspector of Schools, Assistant Medical Inspector of Schools, Bacteriologist, Government Analyst, Schools Dental Surgeon, 2 Senior Government Medical Officers (whole time), 3 Senior Government Medical Officers (Grade I.), 4 Government Medical Officers (Grade II.), 15 Government Medical Officers (Grade III.), 8 Aided Medical Officers, Chief Clerk, Senior Clerk, 1 Clerk (Grade II.), 1 Clerk (Grade III.), 2 Clerks on probation, 2 temporary Clerks, 1 Lady Clerk (Upper Grade), 2 Lady Clerks (Middle Grade), 3 Lady Clerks (Lower Grade), 3 Lady Clerks (temporary), 2 Inspectors of Compounds, 2 Laboratory Assistants, 2 Radiographers, 5 Hospital Secretaries and Dispensers, 2 Dispensers, Senior Matron, 9 Hospital Matrons, 2 Assistant Matrons, 13 Nurse Matrons and Sisters, 46 qualified Nurses, 65 Probationers, 1 District Nurse, 9 Asylum Keepers and Overseers, 2 Male European Orderlies, 1 Female Attendant (mental hospital), 1 Masseuse (part time), 2 Interpreters, 2 Messengers, 5 Native Laboratory Assistants.

Supplementary Auxiliary Staff.—Six part-time hospital secretaries, 4 needlewomen, 1 laundress, 1 European female cook.

The miscellaneous native staff attached to the various institutions totalled 227.

Total European staff	230
Total native staff	236
	466

Table 1.

EUROPEAN BIRTHS, 1927.

District	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Totals
Salisbury ...	34	25	27	24	27	28	33	33	29	25	22	24	231
Bulawayo ...	20	30	27	23	24	28	25	24	19	23	16	25	284
Umtali ...	6	3	8	6	16	9	5	5	12	9	13	17	109
Gwelo ...	9	5	4	2	9	3	7	8	6	7	5	6	71
Victoria ...	4	3	...	5	2	2	2	5	2	5	1	1	32
Gatooma ...	3	...	4	6	5	4	2	1	15	3	2	6	51
Gwanda ...	...	...	...	...	...	...	...	...	2	1	...	...	3
Selukwe ...	3	4	2	2	1	3	...	2	2	1	3	3	26
Charter ...	4	1	2	6	3	1	2	...	4	1	1	2	27
Melsetter ...	7	1	...	...	...	2	...	1	...	1	...	2	14
Umvuma ...	2	2	4	2	...	...	4	2	1	1	2	1	21
Hartley ...	3	2	6	...	2	2	3	1	...	2	1	...	22
Que Que ...	2	4	2	1	1	1	...	1	2	4	3	1	22
Totals ...	97	80	86	77	90	83	83	83	94	83	69	88	1,013

Table 2.

EUROPEAN DEATHS, 1927.

Age periods.	Males.	Females.	Totals.
0-1	33	15	48
1-5	13	8	21
5-15	14	6	20
15-25	19	4	23
25-35	28	9	37
35-45	22	20	42
45-55	45	16	61
55-65	39	19	58
65-75	27	15	42
75-85 and over	16	7	23
Age unknown	2	...	2
All ages	258	119	377

TABLE 3.

EUROPEAN DEATHS, 1927.

District.	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Totals
Salisbury ...	12	3	11	18	8	14	9	15	11	7	10	13	131
Bulawayo ...	18	9	7	8	12	9	14	13	7	9	19	10	135
Umtali ...	2	...	4	3	3	7	3	2	4	3	2	3	36
Gwelo ...	2	1	1	2	...	3	2	1	3	...	5	1	21
Victoria ...	1	2	1	...	1	...	1	2	...	1	2	1	12
Gatooma ...	...	1	1	1	2	...	1	...	1	1	...	2	10
Gwanda ...	1	1	...	...	...	...	1	...	1	...	...	...	4
Selukwe ...	1	...	...	...	1	...	...	...	2	...	...	...	4
Charter ...	1	...	...	...	...	1	...	...	1	1	...	...	4
Melsetter ...	...	1	...	1	...	1	...	...	...	...	...	...	3
Umvuma ...	1	...	1	1	...	1	...	...	2	...	...	...	6
Hartley ...	...	...	...	...	...	...	...	...	...	...	1	1	2
Que Que ...	...	...	1	...	1	...	2	1	...	1	1	2	9
Totals ...	39	18	27	34	28	36	33	34	32	23	40	33	377

TABLE 4.

EUROPEAN BIRTHS AND DEATHS, 1927.

Month	Births	Deaths	Ages of dying.										
			0-1	1-5	5-15	15-25	25-35	35-45	45-55	55-65	65-75	75-85 and over.	Age unknown
January ...	97	39	7	1	3	4	2	5	9	4	3	1	...
February	80	18	2	2	...	3	3	2	1	2	2	1	...
March ...	86	27	5	...	3	2	4	...	5	2	3	3	...
April ...	77	34	2	1	1	3	1	4	4	8	6	3	1
May ...	90	28	4	2	...	1	3	3	3	6	3	2	1
June ...	83	36	2	8	1	...	2	1	5	6	7	4	...
July ...	83	33	4	1	1	2	4	6	5	4	4	2	...
August ...	83	34	4	2	3	1	5	1	8	8	1	1	...
September	94	32	3	1	1	1	5	4	7	7	2	1	...
October ...	83	23	5	...	2	2	...	4	4	3	2	1	...
November	69	40	6	2	3	2	5	10	4	5	2	1	...
December	88	33	4	1	2	2	3	2	6	3	7	3	...
Totals	1,013	377	48	21	20	23	37	42	61	58	42	23	2
Per cent. of total ...			12.73	5.57	5.30	6.10	9.81	11.14	16.18	15.38	11.14	6.10	.53

18.30 of European deaths.

Illegitimate births 2.66 per cent. of total births.

TABLE 5.

TABLE SHOWING EUROPEAN ADMISSIONS TO HOSPITALS DURING 1927.

Name of hospital.	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Totals
Salisbury ...	141	102	134	130	122	122	94	112	121	136	171	185	1,570
Bulawayo ...	106	71	92	94	94	92	101	99	116	123	105	116	1,209
Umtali ...	29	27	38	39	42	35	28	25	29	28	25	36	381
Gwelo ...	15	27	29	22	26	16	27	37	25	37	30	23	314
Fort Victoria	11	6	5	13	14	14	21	17	9	22	10	11	153
Gwanda ...	3	5	7	1	5	3	6	2	2	2	...	3	39
Enkeldoorn	6	6	4	4	7	7	2	3	10	9	4	7	69
Gatooma ...	25	21	18	20	23	14	13	14	29	20	26	18	241
Shamva ...	9	10	10	14	8	7	2	9	7	12	4	5	97
Sinoia ...	4	14	11	16	17	13	10	12	7	6	19	13	142
Belingwe ...	...	3	1	1	...	1	1	4	1	2	1	1	16
Totals ...	349	292	349	354	358	324	305	334	356	397	395	418	4,231

TABLE 6.

TABLE SHOWING NATIVE ADMISSIONS TO HOSPITALS DURING 1927.

Name of hospital.	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total.
Salisbury ...	110	105	104	112	98	125	145	130	154	189	133	122	1,527
Bulawayo ...	128	94	144	90	106	88	94	107	87	110	130	128	1,306
Umtali ...	41	34	41	31	27	25	35	33	20	38	23	24	372
Gwelo ...	61	33	37	32	55	47	37	46	31	49	58	49	535
Fort Victoria	8	14	16	10	11	9	15	8	15	15	14	11	146
Gwanda ...	17	12	12	11	12	8	11	6	8	9	10	18	134
Enkeldoorn	19	7	6	8	5	9	5	13	12	6	12	11	113
Gatooma ...	62	45	54	54	59	22	33	37	30	33	28	32	489
Shamva ...	19	14	15	22	13	10	16	16	20	18	13	20	196
Sinoia ...	23	24	21	12	17	29	21	28	17	27	20	15	254
Belingwe ...	12	5	7	6	14	10	4	13	9	8	6	12	106
Totals ...	500	387	457	388	417	382	416	437	403	502	447	442	5,178

Table 7.

Table showing monthly admissions to hospitals during 1927 from malaria, blackwater fever, dysentery, pneumonia, typhoid fever and scurvy.

EUROPEANS.

Disease.	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Totals
Malaria ...	58	48	72	72	80	37	28	9	23	32	39	47	545
Blackwater fever	3	...	4	6	3	1	3	...	...	...	2	...	22
Dysentery ...	14	15	4	3	1	2	1	2	1	14	6	7	70
Pneumonia...	2	3	6	6	13	3	10	16	...	...	...	...	90
Typhoid fever	4	1	...	2	3	1	...	2	3	1	4	8	29
Scurvy ...	...	...	...	...	...	...	...	...	...	...	...	...	...

NATIVES.

Malaria ...	38	45	35	43	65	30	26	13	17	21	15	31	379
Blackwater fever	...	1	...	...	...	...	...	...	...	...	...	...	1
Dysentery ...	8	7	12	5	7	...	3	3	8	8	8	4	73
Pneumonia...	49	23	44	22	56	56	85	110	94	108	79	70	796
Typhoid fever	5	1	3	1	...	...	...	...	...	3	...	3	16
Scurvy ...	16	9	1	10	8	3	6	7	8	26	12	9	115

Table 8.

Cases, with mortality rate per cent., admitted to hospitals during 1927, as compared with 1926.

Name of hospital.		1926.			1927.		
		Cases.	Deaths.	Mortality rate per cent.	Cases.	Deaths.	Mortality rate per cent.
Salisbury	White	1,343	46	3.42	1,570	53	3.38
	Native	1,386	193	13.92	1,527	249	16.31
Bulawayo	White	1,099	41	3.73	1,209	52	4 30
	Native	1,267	154	12.15	1,306	135	10.34
Umtali	White	392	12	3.06	381	15	3.94
	Native	521	73	14.00	372	32	8.60
Gwelo	White	285	13	4.56	314	14	4.46
	Native	499	63	1.26	535	65	12.15
Fort Victoria... ...	White	116	3	2.59	153	3	1.96
	Native	119	5	4.20	146	8	5.48
Gwanda	White	38	...	...	39	2	5.13
	Native	153	15	9.80	134	9	6.72
Enkeldoorn	White	79	...	...	69	1	1.45
	Native	93	8	8.60	113	2	1.77
Gatooma	White	246	8	3.25	241	4	1.66
	Native	745	93	12.48	489	55	11.25
Shamva	White	107	6	5.61	97	3	3.09
	Native	191	25	13.09	196	35	17.86
Sinoia	White	116	2	1.72	142	4	2.82
	Native	149	23	15.44	254	41	16.14
Belingwe	White	6	...	...	16	...	...
	Native	45	1	2.22	106	1	.94
Totals ...	White	3,827	131	3 42	4,231	151	3.57
	Native	5,168	653	12.64	5,178	632	12.20

TABLE 9.

Cases, with mortality rate per cent., of malarial fever admitted to hospitals in 1927, as compared with 1926.

Name of hospital.		1926.			1927.		
		Cases.	Deaths.	Mortality rate per cent.	Cases.	Deaths.	Mortality rate per cent.
Salisbury ...	White	130	...	...	132	2	1.51
	Native	78	1	1.28	109	1	.92
Bulawayo ...	White	82	1	1.22	75	...	...
	Native	84	3	3.57	68	...	...
Umtali	White	137	...	...	112	1	.89
	Native	99	3	3.03	81	8	9.88
Gwelo	White	55	1	1.82	42	...	...
	Native	41	1	2.44	31	...	...
Fort Victoria ...	White	33	...	...	18	...	...
	Native	6	...	...	...	...	...
Gwanda	White	5	...	...	5	...	...
	Native	10	1	10.00	6	...	...
Enkeldoorn ...	White	12	...	...	15	...	...
	Native	8	1	12.50	11	...	...
Gatooma ...	White	76	1	1.32	49	...	...
	Native	15	2	13.33	15	1	6.67
Shamva	White	39	1	2.56	41	..	...
	Native	22	...	...	28	2	7.14
Sinoia	White	45	...	...	53	1	1.89
	Native	19	2	10.53	11	1	9.09
Belingwe ...	White	...	...	...	3	...	...
	Native	...	...	...	19	...	...
Totals ...	White	614	4	0.65	545	4	.73
	Native	382	14	3.67	379	13	3.43

TABLE 10.

Cases, with mortality rate per cent., of hæmoglobinuric fever (blackwater) admitted to hospitals in 1927, as compared with 1926.

Name of hospital.		1926.			1927.		
		Cases.	Deaths.	Mortality rate per cent.	Cases.	Deaths.	Mortality rate per cent.
Salisbury ...	White	7	1	14.29	4	2	50.00
	Native	...	...	...	...	...	...
Bulawayo ...	White	4	1	25.00	7	2	28.57
	Native	...	...	...	...	...	...
Umtali	White	5	1	20.00	4	1	25.00
	Native	2*	1	50.00	...	...	...
Gwelo	White	2	1	50.00	...	...	...
	Native	...	...	...	...	...	...
Fort Victoria ...	White	...	...	...	1	1	100.00
	Native	...	...	...	1	1	100.00
Gwanda	White	...	...	...	...	...	...
	Native	...	...	...	...	...	...
Enkeldoorn ...	White	1	...	...	...	...	...
	Native	...	...	...	...	...	...
Gatooma ...	White	4	1	25.00	1	...	...
	Native	...	...	...	...	...	...
Shamva	White	10	5	50.00	4	...	...
	Native	...	...	...	...	...	...
Sinoia	White	3	1	33.33	1	1	100.00
	Native	...	...	...	...	...	...
Belingwe ...	White	...	...	...	...	...	...
	Native	...	...	...	...	...	...
Totals ...	White	36	11	30.56	22	7	31.82
	Native	2	1	50.00	1	1	100.00

* 1 Indian, 1 Coloured.

Table 11.

Cases, with mortality rate per cent., of pneumonia admitted to hospitals in 1927, as compared with 1926.

Name of hospital.		1926.			1927.		
		Cases.	Deaths.	Mortality rate per cent.	Cases.	Deaths.	Mortality rate per cent.
Salisbury ...	White	45	11	24.44	34	4	11.76
	Native	416	113	27.16	415	116	27.96
Bulawayo ...	White	18	2	11.11	17	3	17.65
	Native	205	74	36.10	133	51	38.35
Umtali	White	5	3	60.00	5	...	...
	Native	104	43	41.35	47	12	25.53
Gwelo	White	7	2	28.57	10	1	10.00
	Native	74	25	33.78	74	27	36.49
Fort Victoria ...	White	...	...	...	2	1	50.00
	Native	2	...	...	10	1	10.00
Gwanda	White	...	...	...	...	...	...
	Native	13	3	23.08	7	1	14.29
Enkeldoorn ...	White	1	...	...	5	...	...
	Native	5	1	20.00	8	...	...
Gatooma ...	White	4	...	...	12	...	...
	Native	52	23	44.23	57	15	26.32
Shamva	White	1	...	...	2	...	...
	Native	5	2	40.00	9	4	44.45
Sinoia	White	1	...	...	2	...	...
	Native	22	12	54.55	28	13	46.43
Belingwe ...	White	...	...	...	1	...	...
	Native	...	...	...	8	...	...
Totals ...	White	82	18	21.95	90	9	10.00
	Native	898	296	32.96	796	240	30.15

Table 12.

Cases, with mortality rate per cent., of dysentery admitted to hospitals in 1927, as compared with 1926.

Name of hospital.		1926.			1927.		
		Cases.	Deaths.	Mortality rate per cent.	Cases.	Deaths.	Mortality rate per cent.
Salisbury ...	White	13	...	...	25	1	4.00
	Native	24	...	...	29	7	24.14
Bulawayo ...	White	15	...	...	13	...	...
	Native	13	7	53.85	11	3	27.27
Umtali	White	11	...	...	11	2	18.18
	Native	14	1	7.14	4	2	50.00
Gwelo	White	7	...	...	1	...	...
	Native	7	1	14.28	6	2	33.33
Fort Victoria ...	White	1	...	...	4	...	...
	Native	2	...	...	3	...	...
Gwanda	White	...	...	...	2	...	...
	Native	...	...	...	...	...	...
Enkeldoorn ...	White	1	...	...	3	...	...
	Native	...	...	...	...	...	...
Gatooma ...	White	...	...	...	7	...	...
	Native	...	...	...	9	1	11.11
Shamva	White	1	...	...	3	1	33.33
	Native	1	...	...	1	1	100.00
Sinoia	White	5	...	...	1	...	...
	Native	1	1	100.00	7	1	14.29
Belingwe ...	White	...	...	...	...	...	...
	Native	...	...	...	3	1	33.33
Totals ...	White	54	...	...	70	4	5.71
	Native	62	10	16.13	73	18	24.66

Table 13.

Cases, with mortality rate per cent., of typhoid fever admitted to hospitals in 1927, as compared with 1926.

Name of hospital.		1926.			1927.		
		Cases.	Deaths.	Mortality rate per cent.	Cases.	Deaths.	Mortality rate per cent.
Salisbury ...	White	7	1	14.28	8	...	...
	Native	11	4	36.37	7	6	85.72
Bulawayo ...	White	13	3	23.08	14	...	...
	Native	1	...	...	5	2	40.00
Umtali	White	8	2	25.00	...	...	...
	Native	...	...	...	...	...	...
Gwelo	White	8	...	...	3	2	66.66
	Native	...	...	...	2	...	...
Fort Victoria ...	White	...	...	...	...	...	...
	Native	...	...	...	...	...	...
Gwanda	White	1	...	..	...	...	...
	Native	...	...	...	1	1	100.00
Enkeldoorn ...	White	1	...	...	1	...	...
	Native	...	...	...	...	...	...
Gatooma ...	White	...	...	...	3	...	...
	Native	...	...	...	1	1	100.00
Shamva	White	...	...	...	...	...	...
	Native	...	...	...	...	...	...
Sinoia	White	...	...	...	...	...	...
	Native	...	...	...	...	...	...
Belingwe ...	White	...	...	...	...	...	...
	Native	...	...	...	...	...	...
Totals ...	White	38	6	15.79	29	2	6.90
	Native	12	4	33.33	16	10	62.50

Table 14.

Cases, with mortality rate per cent., of scurvy admitted to hospitals in 1927, as compared with 1926.

Name of hospital.		1926.			1927.		
		Cases.	Deaths.	Mortality rate per cent.	Cases.	Deaths.	Mortality rate per cent.
Salisbury ...	White	...	...	...	...	...	...
	Native	...	...	...	3	...	...
Bulawayo ...	White	...	...	...	...	...	...
	Native	38	1	2.63	43	...	...
Umtali	White	...	...	...	...	...	...
	Native	2	...	...	2	...	...
Gwelo	White	...	...	...	...	...	...
	Native	4	1	25.00	23	2	8.70
Fort Victoria ...	White	...	...	...	...	...	...
	Native	...	...	...	2	...	...
Gwanda	White	...	...	...	...	...	...
	Native	3	1	33.33	11	1	9.09
Enkeldoorn ...	White	...	...	...	...	...	...
	Native	4	...	...	...	...	...
Gatooma ...	White	...	...	...	...	...	...
	Native	22	2	9 09	14	1	7.14
Shamva	White	...	...	...	...	...	...
	Native	1	...	...	1	...	...
Sinoia	White	...	...	...	...	...	...
	Native	12	...	...	9	2	22.22
Belingwe ...	White	...	...	...	...	...	...
	Native	...	...	...	7	...	...
Totals ...	White	...	...	...	...	...	...
	Native	86	5	5.81	115	6	5.22

Table 15.

RETURN OF DEATHS REGISTERED DURING THE YEAR 1927.

Name of disease.	EUROPEANS																								NATIVES						Grand totals	
	0-1		1-5		5-15		15-25		25-35		35-45		45-55		55-65		65-75		75-85		Age unknown		Totals		Under 5 years		Over 5 years		Totals			
	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F
I. GENERAL DISEASES.																																
1. Typhoid fever	...	...	...	...	1	...	1	...	...	1	1	2	...	...	...	...	...	...	...	...	...	...	3	3	...	...	9	1	9	1	12	4
3. Relapsing fever	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	1	...
4. Malaria	2	2	1	3	1	...	...	...	...	...	1	1	...	1	1	...	2	...	...	...	...	...	8	7	2	2	10	1	12	3	20	10
4a. Blackwater fever	...	...	...	...	...	...	4	1	2	2	1	...	4	...	...	...	...	...	...	...	1	...	12	3	...	...	1	...	1	...	13	3
6. Measles	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	1	...	1	1	1
9. Diphtheria and croup	...	...	2	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2	1	...	...	...	...	...	...	2	1
10. Influenza	...	1	...	1	1	...	...	...	1	...	...	...	...	...	...	2	...	...	2	1	...	...	4	5	...	...	10	...	10	...	14	5
14. Dysentery	...	2	2	...	1	...	...	...	...	...	...	...	...	...	...	...	1	1	...	...	...	...	4	3	...	...	17	1	17	1	21	4
18. Erysipelas	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	1	...	1	...	1	1
20. Purulent infection and septicæmia ...	...	...	1	...	...	1	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	2	1	...	...	13	1	13	1	15	2
24. Tetanus	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	4	...	4	...	4	...
28. Tuberculosis of the lungs	...	...	...	...	...	...	...	...	7	1	3	...	1	1	5	...	...	...	...	...	...	...	16	2	...	1	71	1	71	2	87	4
30. Tuberculous meningitis	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	1	...	2	...	3	...	4	...
31. Abdominal tuberculosis	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	4	1	4	1	4	1
32. Potts' disease	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	1	...	1	...
34. Tuberculosis of other organs ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	4	...	4	...	4	...
35. Disseminated tuberculosis	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	3	...	3	...	3	...
37. Syphilis	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	1	3	10	3	11	6	12	6
40. Cancer and other malignant tumours of the stomach, liver	...	...	...	...	...	...	...	...	...	...	...	...	4	1	3	...	1	...	1	...	...	...	9	1	...	...	10	1	10	1	19	2
41. Cancer and other malignant tumours of the peritonæum, intestines, rectum	...	...	...	...	...	...	...	...	...	...	...	...	...	...	3	1	1	1	...	...	...	...	4	2	...	...	...	...	...	...	4	2
42. Cancer and other malignant tumours of the female genital organs ...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	2	...	...	...	...	...	...	...	3	...	...	...	1	...	1	...	4
43. Cancer and other malignant tumours of the breast	...	...	...	...	...	...	...	...	...	...	...	1	...	1	...	2	...	1	...	...	...	...	...	5	...	...	...	...	...	...	...	5
44. Cancer and other malignant tumours of the skin	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	1	...	...	...	...	...	...	...	1	...
45. Cancer and other malignant tumours of other organs or of organs not specified	...	...	...	...	...	...	...	...	1	...	...	2	3	1	1	1	1	1	...	...	...	...	6	5	...	...	5	...	5	...	11	5
47. Acute articular rheumatism	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	1	1	1	1	1	2
49. Scurvy	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	5	...	5	...	5	...
50. Diabetes	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	2	...	...	...	...	...	...	1	2	...	...	...	...	...	...	1	2
54. Anæmia, chlorosis	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	1
55. Other general diseases	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	1	...	1	1	1	1
56. Alcoholism, acute or chronic ...	...	...	...	...	...	...	...	...	...	...	...	1	1	...	1	...	...	...	...	...	...	...	2	1	...	...	...	...	...	...	2	1
Carried forward	3	5	6	5	5	3	6	1	11	5	8	7	13	6	15	10	7	4	3	1	1	...	78	47	4	7	182	13	186	20	264	67

Name of disease.	EUROPEANS																								NATIVES						Grand totals	
	0-1		1-5		5-15		15-25		25-35		35-45		45-55		55-65		65-75		75-85		Age unknown		Totals		Under 5 years		Over 5 years		Totals			
	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F
Brought forward	3	5	6	5	5	3	6	1	11	5	8	7	13	6	15	10	7	4	3	1	1	...	78	47	4	7	182	13	186	20	264	67
II. DISEASES OF THE NERVOUS SYSTEM AND OF THE ORGANS OF SPECIAL SENSE.																																
60. Encephalitis	...	...	...	...	1	...	...	...	...	...	...	2	...	...	...	...	...	...	...	...	...	...	1	2	...	...	3	...	3	...	4	2
61. Simple meningitis	...	...	...	...	1	1	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	2	1	...	1	25	1	25	2	27	3
61a. Cerebro-spinal fever	1	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2	...	...	...	1	...	1	...	3	...
63. Other diseases of the spinal cord ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	1	...	...	...	3	...	3	...	4	...
64. Cerebral hæmorrhage, apoplexy ...	1	...	...	...	...	...	...	...	...	...	...	1	1	...	1	1	...	3	...	1	...	...	3	6	...	...	1	...	1	...	4	6
66. Paralysis without specified cause ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	1	...	...	3	...	3	...	3	1
67. General paralysis of the insane ..	...	...	...	...	...	...	...	...	...	...	1	...	...	...	1	...	...	...	...	...	...	...	2	...	...	...	...	...	...	...	2	...
68. Other forms of mental alienation ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	1	...	...	...	2	...	...	...	13	3	13	3	15	3
69. Epilepsy	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	4	1	4	1	5	1
71. Convulsions of infants	3	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	4	...	1	1	...	...	1	1	5	1
73. Neuralgia and neuritis	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	1	...	1	...
74. Other diseases of the nervous system	2	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	3	...	...	...	...	2	...	2	3	2
76. Diseases of the ears	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	1	...	1	...
III. DISEASES OF THE CIRCULATORY SYSTEM.																																
77. Pericarditis	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	2	...	2	...	3	...
78. Acute endocarditis	...	...	...	...	...	...	...	...	...	...	...	2	2	...	...	...	3	...	...	...	...	...	5	2	...	...	2	...	2	...	7	2
79. Organic diseases of the heart ...	3	...	...	...	...	...	...	...	...	1	1	3	1	...	3	2	4	1	2	1	...	...	14	8	1	...	11	3	12	3	26	11
80. Angina pectoris	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	1	...
81. Diseases of the arteries, atheroma, aneurism, etc.	...	...	...	...	...	...	...	...	...	...	...	...	...	1	1	...	...	...	...	...	...	...	1	1	...	...	...	1	...	1	1	2
82. Embolism and thrombosis	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	2	2	2	2	3	2
84. Diseases of the lymphatic system, lymphangitis, etc.	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	1	...	...	...	...	...	...	...	1
85. Hæmorrhage, other diseases of the circulatory system	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	1	...	...	...	1	...	2	...
IV. DISEASES OF THE RESPIRATORY SYSTEM.																																
88. Diseases of the thyroid body ...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	1
89. Acute bronchitis	1	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	2	...	...	...	3	...	3	...	5	...
90. Chronic bronchitis	...	...	...	...	...	...	...	...	...	...	...	...	1	...	2	...	...	...	...	1	...	...	3	1	...	...	...	...	...	...	3	1
91. Broncho pneumonia	5	2	2	1	...	...	...	...	...	...	1	...	1	1	...	...	...	...	...	...	...	...	9	4	4	4	52	4	56	8	65	12
92. Pneumonia	...	...	1	1	...	...	1	...	6	...	2	...	3	2	2	...	2	1	...	...	...	...	17	4	6	5	171	4	177	9	194	13
93. Pleurisy	...	...	...	...	...	...	1	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	2	...	...	...	2	...	2	...	4	...
95. Gangrene of the lung	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	1	...	1	...
96. Asthma	...	1	...	...	...	...	...	...	...	...	...	...	...	...	1	...	1	...	...	...	...	...	2	1	...	...	1	...	1	...	3	1
98. Other diseases of the respiratory system (tuberculosis excepted) ...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	1	...
Carried forward	19	8	10	7	7	4	10	1	20	6	15	16	25	10	29	14	17	10	6	4	1	...	159	80	17	18	484	34	501	52	660	132

Name of disease.	EUROPEANS																								NATIVES						Grand totals	
	0-1		1-5		5-15		15-25		25-35		35-45		45-55		55-65		65-75		75-85		Age unknown		Totals		Under 5 years		Over 5 years		Totals			
	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F
Brought forward	19	8	10	7	7	4	10	1	20	6	15	16	25	10	29	14	17	10	6	4	1	...	159	80	17	18	484	34	501	52	660	132
V. DISEASES OF THE DIGESTIVE SYSTEM.																																
102. Ulcer of the stomach	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	1	1	1	1	1
104. Diarrhœa and enteritis (under 2 years)	2	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2	...	4	1	...	...	4	1	6	1
105. Diarrhœa and enteritis (2 years and over)	...	...	1	1	1	1	...	...	...	...	...	...	...	...	...	...	2	1	...	1	...	...	4	4	...	...	2	...	2	...	6	4
108. Appendicitis and typhilitis	...	...	...	...	1	1	1	...	1	2	...	...	3	...	...	1	...	...	...	...	...	...	6	4	...	...	...	...	...	...	6	4
109. Hernias: intestinal obstructions ...	1	...	...	...	...	...	...	...	1	...	...	...	...	3	...	...	...	...	...	...	...	...	2	3	...	...	7	...	7	...	9	3
110. Other diseases of the intestine ...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	1	...	...	2	...	2	...	2	1
111. Acute yellow atrophy of the liver ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	1	...	1	...
112. Hydatid tumour of the liver ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	1	...	1	...
113. Cirrhosis of the liver	...	...	...	...	...	...	1	...	...	...	1	...	2	...	1	...	...	...	...	...	...	...	5	...	...	1	5	1	5	2	10	2
115. Other diseases of the liver	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	1	...
116. Diseases of the spleen	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2	...	2	...	2	...
117. Simple peritonitis (non-puerperal) ...	1	...	...	...	...	...	...	...	1	...	...	...	...	...	...	1	...	...	...	...	...	...	2	1	...	...	7	1	7	1	9	2
118. Other diseases of the digestive system (cancer and tuberculosis excepted)	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	1	...	2	...	2
VI. NON-VENEREAL DISEASES OF THE GENITO-URINARY SYSTEM AND ANNEXA.																																
119. Acute nephritis	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	1	...	...	...	1	...	1	...	2
120. Bright's disease	...	...	...	...	...	...	1	...	...	...	1	1	...	...	3	1	1	...	1	...	...	...	7	2	...	...	1	3	1	3	8	5
122. Other diseases of the kidneys and annexa	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	1	...	...	...	...	1	...	1	1	1
123. Calculi of the urinary passages ...	...	...	...	...	...	...	...	...	...	...	...	...	1	1	...	1	...	...	1	...	...	...	2	2	...	...	...	...	...	...	2	2
124. Diseases of the bladder	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	1	...	1	...
125. Diseases of the urethra, urinary passages, etc.	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	1	...
126. Diseases of the prostate	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	1	...	...	...	2	...	...	...	...	...	...	...	2	...
129. Uterine tumour (non-cancerous) ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	1	...	1
130. Other diseases of the uterus	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	1	...	1	...	2
132. Salpingitis and other diseases of the female genital organs	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	1	...	1
VII. THE PUERPERAL STATE.																																
134. Accidents of pregnancy	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	1	...	1
135. Puerperal hæmorrhage	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	1
136. Other accidents of labour	...	...	...	...	...	...	...	1	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	2	...	...	...	...	...	...	...	2
137. Puerperal septicæmia	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	1	...	1
VIII. DISEASES OF THE SKIN AND CELLULAR TISSUE.																																
142. Gangrene	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	1	...	...	3	...	3	...	3	1
IX. DISEASES OF THE BONES AND OF THE ORGANS OF LOCOMOTION.																																
146. Diseases of the bones (tuberculosis																																

Name of disease.	0-1		1-5		5-15		15-25		25-35		35-45		45-55		55-65		65-75		75-85		Age unknown		Totals		Under 5 years		Over 5 years		Totals		Grand totals	
	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F
Brought forward	23	8	11	8	9	6	13	2	23	9	18	19	31	16	36	19	20	11	9	5	1	...	194	103	21	21	519	48	540	69	734	172
X. MALFORMATIONS.																																
150. Congenital malformations (still-births not included)	...	2	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2	...	...	...	...	...	...	...	2
XI. DISEASES OF EARLY INFANCY.																																
151. Congenital debility, icterus and sclerema	9	2	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	9	2	5	3	...	...	5	3	14	5
152. Other diseases peculiar to early infancy	...	2	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2	...	...	...	...	...	...	...	2
XII. OLD AGE.																																
154. Senility	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2	2	3	1	...	...	5	3	...	...	1	...	1	...	6	3
XIII. AFFECTIONS PRODUCED BY EXTERNAL CAUSES.																																
155. Suicide by poison	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	1	...
158. Suicide by drowning	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	1	...	1
159. Suicide by firearms	...	...	...	...	...	...	...	...	3	...	1	...	3	...	...	...	...	...	...	...	...	...	7	...	...	...	...	...	...	...	7	...
160. Suicide by cutting or piercing instruments	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	1	...
163. Other suicides	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	1	...
165. Other acute poisonings	...	...	1	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	2	...	...	...	...	...	...	...	2	...
166. Conflagration	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	1	...	3	1	3	...	6	1	7	1
167. Burns (conflagration excepted) ...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	1	...	1	...	2	...
168. Absorption of deleterious gases (conflagration excepted)	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	1	...	1	...
169. Accidental drowning	...	...	1	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	2	...	...	...	...	...	...	...	2	...
170. Traumatism by firearms	...	...	...	...	4	...	1	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	6	...	...	...	3	...	3	...	9	...
171. Traumatism by cutting or piercing instruments	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	1	...	1	...	2	...
172. Traumatism by fall	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	3	...	3	...	3	...
173. Traumatism in mines and quarries ...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	1	...	...	...	1	...	1	...	2	...
174. Traumatism by machines	...	...	...	...	...	...	1	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	2	...	...	...	...	...	...	...	2	...
175. Traumatism by other crushing (vehicles, railways, landslides, etc.)	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	1	...	...	...	...	1	1	...	...	1	...	1	...	2	1
179. Effects of the heat	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	1	...
181. Electricity (lightning excepted) ...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	1	...
182. Homicide by firearms	...	...	...	...	...	...	...	2	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2	...	...	...	...	...	...	...	2
185. Fractures (cause not specified) ...	...	...	...	...	...	...	2	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	2	...	...	...	6	...	6	..	8	...
186. Other external violence	...	...	...	...	...	...	1	...	...	...	...	...	1	...	1	...	...	...	...	...	...	...	3	...	...	...	2	...	2	...	5	...
186a. Execution	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	6	...	6	...	6	...
XIV. ILL-DEFINED DISEASE.																																
187. Ill-defined organic disease ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	1	...	...	...	2	...	...	2	...	2	...	2	2
188. Sudden death	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	1	...	...	...	...	...	...	...	1	...
189. Cause of death not specified or ill-defined	...	1	...	...	...	...	...	...	...	...	1	1	5	...	1	...	4	...	4	...	...	...	15	2	1	...	3	1	4	1	19	3
Totals	33	15	13	8	14	6	19	4	28	9	22	20	45	16	39	19	27	15	16	7	2	...	258	119	30	25	553	50	583	75	841	194

TABLE 16.

CLASSIFICATION OF DEATHS (EUROPEANS), 1927.

Deaths classified according to the international classification of causes of sickness and death.

Classification No.	Disease.	No. of Deaths.
	I.—GENERAL DISEASES.	
1	Typhoid fever	6
3	Relapsing fever	1
4	Malaria	15
4a	Blackwater fever	15
6	Measles	1
9	Diphtheria and croup	3
10	Influenza	9
14	Dysentery	7
18	Erysipelas	1
20	Purulent infection and septicæmia	3
28	Tuberculosis of the lungs	18
30	Tuberculous meningitis	1
37	Syphilis	1
40	Cancer and other malignant tumours of the stomach, liver	10
41	Cancer and other malignant tumours of the peritonæum, intestines, rectum	6
42	Cancer and other malignant tumours of the female genital organs	3
43	Cancer and other malignant tumours of the breast	5
44	Cancer and other malignant tumours of the skin	1
45	Cancer and other malignant tumours of other organs or of organs not specified	11
47	Acute articular rheumatism	1
50	Diabetes	3
54	Anæmia, chlorosis	1
56	Alcoholism, acute or chronic	3
	II.—DISEASES OF THE NERVOUS SYSTEM AND OF THE ORGANS OF SPECIAL SENSE.	
60	Encephalitis	3
61	Simple meningitis	3
61a	Cerebro-spinal meningitis	2
63	Other diseases of the spinal cord	1
64	Cerebral hæmorrhage: apoplexy	9
66	Paralysis without specified cause	1
67	General paralysis of the insane	2
68	Other forms of mental alienation	2
69	Epilepsy	1
71	Convulsions of infants	4
74	Other diseases of the nervous system	3
	III.—DISEASES OF THE CIRCULATORY SYSTEM.	
77	Pericarditis	1
78	Acute endocarditis	7
79	Organic diseases of the heart	22
80	Angina pectoris	1
81	Diseases of the arteries, atheroma, aneurism, etc.	2
82	Embolism and thrombosis	1
84	Diseases of the lymphatic system, lymphangitis, etc.	1
85	Hæmorrhage, other diseases of the circulatory system	1
	IV.—DISEASES OF THE RESPIRATORY SYSTEM.	
88	Diseases of the thyroid body	1
89	Acute bronchitis	2
90	Chronic bronchitis	4
91	Broncho-pneumonia	13
92	Pneumonia	21
93	Pleurisy	2
96	Asthma	3
98	Other diseases of the respiratory system (tuberculosis excepted)	1
	Carried forward	239

V.—DISEASES OF THE DIGESTIVE SYSTEM.

Classification No.	Disease.	No. of Deaths.
	Brought forward	239
104	Diarrhœa and enteritis (under 2 years)	2
105	Diarrhœa and enteritis (2 years and over)	8
108	Appendicitis and typhilitis	10
109	Hernias: intestinal obstructions	5
110	Other diseases of the intestine	1
113	Cirrhosis of the liver	5
115	Other diseases of the liver	1
117	Simple peritonitis (non-puerperal)	3

VI.—NON-VENEREAL DISEASES OF THE GENITO-URINARY SYSTEM AND ANNEXA.

119	Acute nephritis	1
120	Bright's disease	9
122	Other diseases of the kidneys and annexa	1
123	Calculi of the urinary passages	4
125	Diseases of the urethra, urinary abscess, etc.	1
126	Diseases of the prostate	2
130	Other diseases of the uterus	1

VII.—THE PUERPERAL STATE.

135	Puerperal hæmorrhage	1
136	Other accidents of labour	2

VIII.—DISEASES OF THE SKIN AND CELLULAR TISSUE.

142	Gangrene	1

X.—MALFORMATIONS.

150	Congenital malformations (still-births not included)	2

XI.—DISEASES OF EARLY INFANCY.

151	Congenital debility, icterus and sclerema	11
152	Other diseases peculiar to early infancy	2

XII.—OLD AGE.

154	Senility	8

XIII.—AFFECTIONS PRODUCED BY EXTERNAL CAUSES.

155	Suicide by poison	1
159	Suicide by firearms	7
160	Suicide by cutting or piercing instruments	1
163	Other suicides	1
165	Other acute poisonings	2
166	Conflagration	1
167	Burns (conflagration excepted)	1
169	Accidental drowning	2
170	Traumatism by firearms	6
171	Traumatism by cutting or piercing instruments	1
173	Traumatism in mines and quarries	1
174	Traumatism by machines	2
175	Traumatism by other crushing (vehicles, railways, landslides, etc.)	2
179	Effects of the heat	1
181	Electricity (lightning excepted)	1
182	Homicide by firearms	2
185	Fractures (cause not specified)	2
186	Other external violence	3

XIV.—ILL-DEFINED DISEASE.

187	Ill-defined organic disease	2
188	Sudden death	1
189	Cause of death not specified or ill-defined	17
	Total	377

TABLE 17.

CLASSIFICATION OF DEATHS (NATIVES AND COLOURED), 1927.

Deaths classified according to the international classification of causes of sickness and death.

I.—GENERAL DISEASES.

Classification No.	Disease.	No. of Deaths.
1	Typhoid fever	10
4	Malaria	15
4a	Blackwater fever	1
6	Measles	1
10	Influenza	10
14	Dysentery	18
18	Erysipelas	1
20	Purulent infection and septicæmia	14
24	Tetanus	4
28	Tuberculosis of lungs	73
30	Tuberculous meningitis	3
31	Abdominal tuberculosis	5
32	Potts' disease	1
34	Tuberculosis of other organs	4
35	Disseminated tuberculosis	3
37	Syphilis	17
40	Cancer and other malignant tumours of the stomach, liver	11
42	Cancer and other malignant tumours of the female genital organs ...	1
45	Cancer and other malignant tumours of other organs and of organs not specified	5
47	Acute articular rheumatism	2
49	Scurvy	5
55	Other general diseases	2

II.—DISEASES OF THE NERVOUS SYSTEM AND OF THE ORGANS OF SPECIAL SENSE.

Classification No.	Disease.	No. of Deaths.
60	Encephalitis	3
61	Simple meningitis	27
61a	Cerebro-spinal fever	1
63	Other diseases of the spinal cord	3
64	Cerebral hæmorrhage: apoplexy	1
66	Paralysis without specified cause	3
68	Other forms of mental alienation	16
69	Epilepsy	5
71	Convulsions of infants	2
73	Neuralgia and neuritis	1
74	Other diseases of the nervous system	2
76	Diseases of the ears	1

III.—DISEASES OF THE CIRCULATORY SYSTEM.

Classification No.	Disease.	No. of Deaths.
77	Pericarditis	2
78	Acute endocarditis	2
79	Organic diseases of the heart	15
81	Diseases of the arteries, atheroma, aneurism, etc.	1
82	Embolism and thrombosis	4
85	Hæmorrhage, other diseases of the circulatory system	1

IV.—DISEASES OF THE RESPIRATORY SYSTEM.

Classification No.	Disease.	No. of Deaths.
89	Acute bronchitis	3
91	Broncho-pneumonia	64
92	Pneumonia	186
93	Pleurisy	2
95	Gangrene of the lung	1
96	Asthma	1

V.—DISEASES OF THE DIGESTIVE SYSTEM.

Classification No.	Disease.	No. of Deaths.
102	Ulcer of the stomach	2
104	Diarrhœa and enteritis (under 2 years)	5
105	Diarrhœa and enteritis (2 years and over)	2
109	Hernia, intestinal obstruction	7
110	Other diseases of the intestines	2
111	Acute yellow atrophy of the liver	1
112	Hydatid tumour of the liver	1
113	Cirrhosis of the liver	7
116	Diseases of the spleen	2
117	Simple peritonitis (non-puerperal)	8
118	Other diseases of the digestive system	2
	Carried forward	592

VI.—NON-VENEREAL DISEASES OF THE GENITO-URINARY SYSTEM AND ANNEXA.

Classification No.	Disease.	No. of Deaths.
	Brought forward	592
119	Acute nephritis	1
120	Bright's disease	4
122	Other diseases of the kidneys and annexa	1
124	Diseases of the bladder	1
129	Uterine tumour (non-cancerous)	1
130	Other diseases of the uterus	1
132	Salpingitis and other diseases of the female genital organs	1

VII.—THE PUERPERAL STATE.

Classification No.	Disease.	No. of Deaths.
134	Accidents of pregnancy	1
137	Puerperal septicæmia	1

VIII.—DISEASES OF THE SKIN AND OF THE CELLULAR TISSUE.

Classification No.	Disease.	No. of Deaths.
142	Gangrene	3

IX.—DISEASES OF THE BONES AND OF THE ORGANS OF LOCOMOTION.

Classification No.	Disease.	No. of Deaths.
146	Diseases of the bones (tuberculosis excepted)	2

XI.—DISEASES OF EARLY INFANCY.

Classification No.	Disease.	No. of Deaths.
151	Congenital debility, icterus and sclerema	8

XII.—OLD AGE.

Classification No.	Disease.	No. of Deaths.
154	Senility	1

XIII.—AFFECTIONS PRODUCED BY EXTERNAL CAUSES.

Classification No.	Disease.	No. of Deaths.
158	Suicide by drowning	1
166	Conflagration	7
167	Burns (conflagration excepted)	1
168	Absorption of deleterious gases (conflagration excepted)	1
170	Traumatism by firearms	3
171	Traumatism by cutting or piercing instruments	1
172	Traumatism by fall	3
173	Traumatism in mines and quarries	1
175	Traumatism by other crushing (vehicles, railways, landslides, etc.) ...	1
185	Fractures (cause not specified)	6
186	Other external violence	2
186a	Execution	6

XIV.—ILL-DEFINED DISEASES.

Classification No.	Disease.	No. of Deaths.
187	Ill-defined organic disease	2
189	Cause of death not specified or ill-defined	5
	Total	658

Included in the foregoing are the following Indian and coloured deaths, classified as follows:—

Classification No.	Disease.	No. of Deaths. Indian.	No. of Deaths. Coloured.
18	Erysipelas	1	—
37	Syphilis	—	2
40	Cancer and other malignant tumours of the stomach, liver ...	2	1
61	Simple meningitis	—	1
71	Convulsions of infants	—	2
79	Organic diseases of the heart	4	2
89	Acute bronchitis	1	—
91	Broncho-pneumonia	1	—
92	Pneumonia	1	4
96	Asthma	1	—
104	Diarrhœa and enteritis (under 2 years)	—	3
109	Hernia, intestinal obstruction	1	—
113	Cirrhosis of the liver	1	—
118	Other diseases of the digestive system (cancer and tuberculosis excepted)	—	1
120	Bright's disease	1	—
151	Congenital debility, icterus and sclerema	3	—
158	Suicide by drowning	1	—
175	Traumatism by other crushing (vehicles, railways, landslides, etc.)	—	1
189	Cause of death not specified or ill-defined	1	—
	Totals	19	17

Table 18.

Return of diseases and deaths (in-patients) in all Government hospitals for the year 1927.

EUROPEANS.

Diseases.	Remaining in hospital at end of 1926.	Yearly total.		Total cases treated.	Remaining in hospital at end of 1927.
		Admissions.	Deaths.		
INFECTIVE DISEASES.					
Cerebro-spinal fever	...	1	1	1	...
Diphtheria	...	4	1	4	...
Dysentery—Amœbic	1	30	3	31	4
Bacillary	...	40	...	40	...
Enteric	7	29	2	36	9
Erysipelas	...	5	...	5	...
Influenza	3	74	...	77	5
Leprosy—(a) Nodular	...	2	...	2	...
Malaria—(a) Tertian	5	356	3	361	8
(b) Quartan	1	42	...	43	...
(c) Æstivo-autumnal	1	133	1	134	6
(d) Chronic	...	14	...	14	...
(e) Blackwater	...	22	7	22	1
Malta fever	4	7	...	11	1
Pneumonia	1	90	9	91	2
Relapsing fever	...	2	...	2	1
Rheumatic fever	...	22	...	22	2
Septicæmia	...	4	...	4	...
Rheumatoid arthritis	...	1	...	1	...
Syphilis—(a) Primary	...	5	...	5	...
(b) Secondary	...	2	...	2	...
(c) Inherited	1	...	...	1	...
Tuberculosis	8	49	15	57	13
Rhodesian 10-day fever	...	4	...	4	...
Encephalitis	...	1	...	1	...
Other infective diseases	...	3	...	3	...
INTOXICATIONS.					
Alcoholism	...	21	...	21	...
GENERAL DISEASES.					
Lumbago	...	2	...	2	...
Anæmia	...	19	...	19	2
Anæmia—Pernicious	...	1	1	1	...
Diabetes	2	14	2	16	...
Exophthalmic goitre	...	2	1	2	...
Gout	...	1	...	1	1
Leucocythæmia	...	1	...	1	1
Hodgkin's disease	...	2	...	2	...
Sciatica	...	3	...	3	...
Rheumatism	...	21	...	21	3
Rickets	...	1	...	1	...
Debility	...	11	...	11	...
Other general diseases	...	3	...	3	3
LOCAL DISEASES.					
Diseases of the nervous system—					
Sub-section 1—					
Neuritis	3	30	...	33	4
Meningitis	1	4	1	5	...
Myelitis	...	1	...	1	...
Encephalitis	...	3	2	3	...
Abscess of brain	...	1	1	1	...
Congestion of brain	...	6	...	6	...
Sub-section 2—					
Apoplexy	...	4	1	4	1
Paralysis	2	7	1	9	3
Chorea	1	2	...	3	...
Epilepsy	1	18	1	19	1
Neuralgia	...	8	...	8	...
Hysteria	...	9	...	9	...
Carried forward	42	1,137	54	1,179	68

Diseases.	Remaining in hospital at end of 1926.	Yearly total.		Total cases treated.	Remaining in hospital at end of 1927.
		Admissions.	Deaths.		
Brought forward	42	1,137	54	1,179	68
Diseases of the nervous system (contd.)—					
Sub-section 3—Mental diseases—					
Idiocy	...	1	...	1	...
Neurasthenia	...	6	...	6	...
Dementia	...	4	...	4	1
Delusional insanity	...	5	...	5	...
Other local diseases	1	4	...	5	1
Diseases of the eye—					
Pterygium	...	7	...	7	...
Conjunctivitis	1	15	...	16	1
Keratitis	1	5	...	6	...
Ulceration of cornea	...	5	..	5	1
Iritis	...	5	..	5	...
Ophthalmia	...	1	...	1	...
Cataract	...	7	...	7	1
Other diseases of the eye	1	14	...	15	3
Diseases of the ear—					
Mastoids	...	13	...	13	1
Inflammation	1	6	...	7	...
Other diseases	1	5	...	6	1
Diseases of the nose	...	7	...	7	1
Antrum	...	5	...	5	...
Diseases of the circulatory system—					
D. A. H.	...	6	...	6	...
Pericarditis	...	2	...	2	...
Endocarditis	1	19	8	20	1
Valvular mitral	...	5	...	5	...
Aortic	...	2	...	2	...
Myocarditis	...	3	1	3	...
Arterial sclerosis	...	6	3	6	...
Aneurism	...	2	...	2	...
Other diseases of the circulatory system ...	1	33	6	34	...
Diseases of the respiratory system—					
Laryngitis	1	9	...	10	...
Bronchitis	1	74	3	75	...
Broncho-pneumonia	...	9	1	9	2
Asthma	...	22	3	22	...
Phthisis	...	1	1	1	...
Pleurisy	1	26	1	27	3
Empyema	1	8	...	9	...
Other diseases of the respiratory system ...	...	12	...	12	...
Diseases of the digestive system—					
Stomatitis	...	4	...	4	...
Caries of teeth	2	93	...	95	1
Sore throat	...	13	...	13	...
Inflammation of tonsils	...	121	...	121	3
Gastritis	2	76	...	78	2
Ulceration of stomach	2	18	1	20	2
Hæmatemesis	...	1	...	1	...
Dilatation of stomach	...	1	...	1	...
Stricture of stomach	...	2	...	2	...
Dyspepsia	1	7	...	8	...
Enteritis	2	53	1	55	5
Appendicitis	9	278	7	287	23
Colitis	1	25	...	26	2
Ulceration of intestines	...	11	1	11	...
Hernia	1	35	...	36	3
Diarrhœa	...	13	...	13	...
Constipation	...	14	...	14	...
Colic	1	16	...	17	...
Hæmorrhoids	...	20	...	20	...
Pancreatitis	...	3	1	3	...
Hepatitis—acute	...	7	...	7	...
Abscess	...	18	...	18	2
Cirrhosis	...	6	3	6	...
Jaundice	...	14	...	14	...
Peritonitis	...	13	9	13	2
Obstruction	...	2	2	2	...
Gall stones	...	39	2	39	3
Other diseases	3	17	...	20	...
Diseases of the lymphatic system					
Splenitis	...	1	...	1	...
Inflammation of lymphatic gland	...	3	...	3	...
Suppuration of lymphatic gland	...	1	...	1	...
Lymphangitis	...	1	...	1	...
Carried forward	78	2,417	107	2,495	133

Diseases.	Remaining in hospital at end of 1926.	Yearly total.		Total cases treated.	Remaining in hospital at end of 1927.
		Admissions.	Deaths.		
Brought forward	78	2,417	107	2,495	133
Diseases of the urinary system—					
Acute nephritis	2	19	6	21	1
Bright's disease	...	6	1	6	1
Pyelitis	...	19	...	19	...
Calculus	1	2	...	3	...
Renal colic	...	8	...	8	...
Cystitis	1	16	...	17	2
Vesical calculus	...	1	...	1	...
Suppression	...	1	1	1	...
Hæmaturia	...	5	...	5	...
Albuminuria	...	3	...	3	...
Other diseases of the urinary system	...	4	...	4	...
Diseases of the generative system—					
Male organs—					
Urethritis	...	13	...	13	...
Stricture	2	12	...	14	...
Prostatitis	...	4	...	4	2
Colopexy	...	4	...	4	...
Phymosis	...	1	...	1	...
Orchitis	...	6	...	6	...
Epididymitis	...	2	...	2	...
Other diseases of the generative system	1	2	...	3	...
Female organs—					
Ovaritis	1	4	...	5	...
Ovarian cyst	...	19	...	19	...
Endometritis	1	38	...	39	...
Displacement of uterus	...	16	...	16	...
Vaginitis	...	1	...	1	...
Amenorrhœa	...	3	...	3	...
Dysmenorrhœa	...	2	...	2	...
Menorrhagia	...	15	...	15	...
Leucorrhœa	...	1	...	1	...
Abortion	...	44	...	44	1
Hysterertimy	1	10	...	11	1
Salpingitis	...	2	...	2	...
Retained placenta	...	4	...	4	...
Mastitis	...	2	...	2	...
Other diseases of female organs	1	74	...	75	5
Diseases of the organs of locomotion—					
Osteitis	1	6	...	7	...
Arthritis	1	24	...	25	1
Synovitis	...	6	...	6	...
Bursitis	1	6	...	7	...
Other diseases of organs of locomotion	...	17	...	17	3
Diseases of connective tissue—					
Cellulitis	1	48	...	49	1
Abscess	...	53	...	53	2
Hæmatoma	...	5	...	5	...
Other diseases of connective tissue	...	13	1	13	1
Diseases of the skin—					
Urticaria	...	11	...	11	...
Eczema	...	13	...	13	...
Boil	...	17	...	17	2
Carbuncle	...	18	...	18	...
Herpes	...	2	...	2	...
Psoriasis	...	1	...	1	...
Oriental sore	...	2	...	2	...
Tinea	...	3	...	3	...
Scabies	...	1	...	1	...
Dermatitis	...	2	...	2	...
Ulcers	1	17	...	18	1
Other diseases of the skin	...	3	...	3	...
Injuries—General	...	55	5	55	5
Local	17	459	3	476	9
Fractures and burns	1	60	3	61	3
Surgical operations	...	79	3	79	...
Major (501)	...	34	...	34	...
Minor (999)	...	168	...	168	...
Tumours	4	...	...	4	...
Malignant	2	40	19	42	3
Benign	1	26	1	27	...
Malformations	...	3	...	3	...
Poisons	2	13	1	15	...
Carried forward	121	3,985	151	4,106	177

Diseases.	Remaining in hospital at end of 1926.	Yearly total.		Total cases treated.	Remaining in hospital at end of 1927.
		Admissions.	Deaths.		
Brought forward	121	3,985	151	4,106	177
Parasites—					
Hydatios	...	2	...	2	...
Tænia solium	...	1	...	1	...
Tænia saginata	...	2	...	2	...
Nematoda—					
Bilharzia	1	19	...	20	...
Ankylostomiasis	...	4	...	4	...
Not otherwise classified	5	68	...	73	4
Senility	2	...	...	2	2
Snake bite	1	...	...	1	...
Confinements	1	15	...	16	...
Undiagnosed	...	135	...	135	1
Totals	131	4,231	151	4,362	184

Table 19.

Return of diseases and deaths (in-patients) in all Government hospitals for the year 1927.

NATIVES.

Diseases.	Remaining in hospital at end of 1926.	Yearly total.		Total cases treated.	Remaining in hospital at end of 1927.
		Admissions.	Deaths.		
INFECTIVE DISEASES.					
Cerebro-spinal fever	...	10	10	10	...
Chicken-pox	...	3	...	3	...
Diphtheria	...	4	2	4	...
Dysentery—Amœbic	5	62	18	67	1
Bacillary	1	11	...	11	1
Enteric	2	16	10	18	1
Gonorrhœa	1	6	...	7	...
Influenza	1	128	...	129	...
Leprosy—(a) Nodular	...	4	...	4	...
(b) Anæsthetic	...	3	...	3	...
Malaria—(a) Tertian	4	262	12	266	5
(b) Quartan	2	31	...	33	3
(c) Æstivo-autumnal	3	85	1	88	2
(d) Chronic	...	1	...	1	...
(e) Blackwater	...	1	1	1	...
Measles	...	2	...	2	...
Malta fever	...	1	...	1	...
Pneumonia	29	796	240	825	31
Relapsing fever	...	5	...	5	...
Rheumatic fever	5	16	...	21	9
Septicæmia	...	18	10	18	1
Syphilis—(a) Primary	27	189	6	216	35
(b) Secondary	...	26	1	26	...
(c) Inherited	2	9	2	11	1
Tetanus	...	9	5	9	...
Tuberculosis	25	135	78	160	15
Rheumatoid arthritis	...	4	...	4	1
Yaws	...	1	...	1	...
Rhodesian 10-day fever	...	1	...	1	...
Other infective diseases	...	4	...	4	...
INTOXICATIONS.					
Others	...	2	...	2	2
GENERAL DISEASES.					
Anæmia	...	12	...	12	...
Debility	...	19	...	19	...
Diabetes	...	2	...	2	...
Exophthalmic goitre	...	3	...	3	...
Lumbago	...	1	...	1	...
Hodgkin's disease	...	1	...	1	...
Purpura	...	1	...	1	...
Rheumatism	...	28	...	28	1
Scurvy	12	115	6	127	15
LOCAL DISEASES.					
Diseases of the nervous system—					
Sub-section 1—					
Neuritis	4	27	...	31	2
Meningitis	4	40	32	44	1
Hydrocephalitis	...	1	...	1	...
Encephalitis	1	4	4	5	...
Abscess of brain	...	2	2	2	...
Sub-section 2—					
Apoplexy	...	7	1	7	2
Paralysis	2	17	4	19	5
Chorea	...	1	...	1	...
Epilepsy	...	24	1	24	4
Neuralgia	...	2	...	2	...
Hysteria	...	1	...	1	...
Sub-section 3—Mental diseases—					
Idiocy	...	2	...	2	...
Mania	...	1	1	1	...
Melancholia	...	1	...	1	...
Dementia	...	14	...	14	...
Carried forward	130	2,171	447	2,301	138

Diseases.	Remaining in hospital at end of 1926.	Yearly total.		Total cases treated.	Remaining in hospital at end of 1927.
		Admissions.	Deaths.		
Brought forward	130	2,171	447	2,301	138
Diseases of the eye—					
Ophthalmia	...	4	...	4	...
Conjunctivitis	2	69	...	71	3
Keratitis	1	23	...	24	1
Ulceration of cornea	5	15	...	20	1
Iritis	...	11	...	11	2
Pterygium	...	1	...	1	..
Cataract	1	9	...	10	2
Other diseases of the eye	4	18	...	22	1
Diseases of the ear—					
Inflammation	...	10	1	10	...
Other diseases	...	2	...	2	1
Diseases of the nose	...	2	...	2	...
Diseases of the circulatory system—					
Pericarditis	...	1	...	1	...
Endocarditis	...	16	13	16	...
Valvular mitral	2	6	1	8	...
Thrombosis	...	1	1	1	...
Pulmonary	...	3	3	3	...
Arterial sclerosis	...	1	...	1	...
Aneurism	...	1	...	1	...
Other diseases of the circulatory system	3	19	10	22	3
Diseases of the respiratory system—					
Laryngitis	...	3	...	3	...
Bronchitis	3	119	3	122	1
Broncho-pneumonia	1	16	3	17	1
Abscess of lung	...	5	3	5	...
Gangrene of lung	...	3	3	3	...
Pleurisy	2	17	...	19	1
Empyema	2	6	3	8	1
Other diseases of the respiratory system	...	6	...	6	...
Diseases of the digestive system—					
Stomatitis	...	4	...	4	...
Caries of teeth	...	10	...	10	...
Sore throat	...	2	...	2	...
Inflammation of tonsils	...	21	...	21	1
Gastritis	...	26	...	26	2
Ulceration of stomach	...	9	1	9	2
Hæmatemesis	...	1	...	1	...
Enteritis	1	15	1	16	...
Appendicitis	...	7	1	7	...
Colitis	...	5	...	5	...
Ulceration of intestines	...	12	...	12	...
Hernia	...	21	4	21	...
Diarrhœa	2	8	...	10	...
Constipation	...	28	..	28	1
Colic	...	21	...	21	...
Hæmorrhoids	2	3	...	5	...
Pancreatitis	...	1	...	1	...
Hepatitis—acute	...	2	1	2	1
Abscess	1	35	2	36	...
Cirrhosis	...	6	4	6	...
Jaundice	...	2	...	2	...
Peritonitis	...	9	9	9	...
Ascites	1	3	2	4	...
Gall stones	...	4	...	4	...
Other diseases of the digestive system	2	8	4	10	...
Diseases of the lymphatic system—					
Splenitis	...	3	...	3	1
Inflammation of lymphatic gland	...	5	...	5	...
Lymphangitis	2	27	...	29	1
Other diseases of the lymphatic system	2	...	...	2	...
Diseases of the urinary system—					
Acute nephritis	1	12	7	13	...
Bright's disease	...	3	1	3	1
Pyelitis	...	5	1	5	...
Calculus	...	1	...	1	...
Cystitis	...	10	...	10	2
Suppression	...	1	...	1	...
Hæmaturia	...	1	...	1	...
Other diseases of the urinary system	...	1	1	1	
Carried forward	170	2,890	530	3,060	168

Diseases.	Remaining in hospital at end of 1926.	Yearly total.		Total cases treated.	Remaining in hospital at end of 1927.
		Admissions.	Deaths.		
Brought forward	170	2,890	530	3,060	168
Diseases of the generative system—					
Male organs—					
Urethritis	...	2	...	2	...
Gleet	...	3	...	3	...
Stricture	...	2	...	2	...
Hydrocele	...	4	...	4	...
Orchitis	...	20	...	20	1
Epididymitis	...	1	...	1	...
Other diseases of the generative system	...	1	1	1	...
Female organs—					
Ovaritis	...	1	...	1	...
Ovarian cyst	...	1	..	1	...
Endometritis	...	6	...	6	...
Amenorrhœa	...	1	...	1	...
Menorrhagia	...	1	...	1	...
Abortion	...	3	...	3	...
Delayed labour	...	5	...	5	...
Retained placenta	...	5	...	5	...
Premature birth	...	1	...	1	...
Puerperal septicæmia	1	1	1	2	...
Mastitis	...	2	...	2	...
Salpingitis	...	1	1	1	...
Other diseases of the female organs	3	13	1	16	...
Diseases of organs of locomotion—					
Osteitis	...	6	1	6	...
Arthritis	3	6	...	9	...
Synovitis	1	11	...	12	...
Bursitis	...	13	...	13	...
Other diseases of organs of locomotion	...	6	...	6	1
Diseases of connective tissue—					
Cellulitis	11	89	5	100	4
Abscess	6	77	1	83	11
Elephantiasis	1	2	...	3	...
Other diseases of connective tissue	7	...	...	7	...
Diseases of the skin—					
Eczema	...	11	...	11	...
Boil	...	7	...	7	...
Herpes	...	2	...	2	...
Oriental sore	1	26	...	27	2
Tinea	...	1	...	1	...
Scabies	...	6	...	6	...
Acne	...	2	...	2	...
Ulcers	18	168	1	186	34
Other diseases of the skin	4	2	...	6	...
Injuries—General	11	312	26	323	18
Local	52	887	26	939	91
Fractures and burns	12	140	14	152	16
Surgical operations—major (122)	6	136	4	142	1
minor (175)	5	76	...	81	2
Tumours—malignant	...	29	17	29	2
benign	...	18	1	18	...
Malformations	1	1	...	2	...
Poisons	...	14	...	14	1
Parasites—					
Cestoda—tænia saginata	...	1	...	1	...
Nematoda—					
Bilharzia	1	9	...	10	1
Ankylostomiasis	...	12	...	12	1
Insecta—Myiasis	...	1	...	1	...
Not otherwise classified	4	90	2	94	1
Snake bite	1	18	...	19	...
Sunstroke	...	1	...	1	...
Undiagnosed	...	34	...	34	...
Totals	319	5,178	632	5,497	355

TABLE 20.

Table giving the number of beds in each Government hospital and Ingutsheni Mental Hospital, the daily average number of patients treated, the revenue and expenditure of each, and the approximate charge on public funds for each patient in hospital during 1927.

Name of hospital.	No. of beds.		Daily average of patients treated.			No. of nursing staff.	No. of native staff.	Gross expenditure.	Revenue.	Deficit of revenue over expenditure.	Approximate charge on public funds for each patient treated.		
	White.	Coloured and native.	White.	Coloured and native.	Total white, coloured and native								
								£	£	£	£	s.	d.
Salisbury	90	100	64.50	86.20	150.70	45	59	20,843	9,536	11,307	3	10	1
Bulawayo	78	67	58.50	90.00	148.50	37	53	16,937	9,750	7,187	2	14	5
Umtali	36	20	15.06	22.99	38.05	7	13	4,333	1,711	2,622	3	6	6
Gwelo	30	53	11.53	43.64	54.17	6	15	4,740	1,788	2,952	3	4	11
Fort Victoria ...	15	20	4.14	6.79	10.93	3	12	2,147	305	1,842	5	17	9
Gwanda	9	16	1.01	6.81	7.82	2	6	1,110	281	829	4	7	9
Enkeldoorn... ...	6	7	1.22	5.97	7.19	2	5	845	124	721	3	17	11
Gatooma	26	100	7.50	72.20	79.70	6	19	4,169	1,349	2,820	2	16	1
Shamva	25	17	2.05	12.81	14.86	3	13	1,830	374	1,456	4	16	5
Sinoia	9	12	2.90	10.19	13.09	3	8	1,627	543	1,084	2	13	9
Belingwe	8	13	.04	.028	.068	1	3	486	111	375	3	1	6
Ingutsheni Mental Hospital	72	250	50.02	186.28	236.30	12	20	8,271	1,926	6,345	21	10	2

Table 22.

Return of Government and pauper patients treated in Government hospitals during 1927.

Name of hospital.	Number of free patients.			Total number of units treated.			Cost of maintenance.			Loss of revenue represented, reckoning 5s. a day for whites, and 2s. 6d. a day for natives, plus extras.		
	White.	Native and coloured.	Totals.	White.	Native and coloured.	Totals.	£	s.	d.	£	s.	d.
Salisbury	260	617	877	5,230	19,981	25,211	5,252	15	0	3,805	2	0
Bulawayo	213	532	745	5,221	18,334	23,555	4,612	17	1	3,597	0	0
Umtali	47	193	240	1,949	5,530	7,479	1,573	14	1	1,222	10	11
Gwelo	60	285	345	1,191	10,798	11,989	2,392	5	7	1,731	17	9
Fort Victoria	22	102	124	206	1,761	1,967	336	0	7	220	2	6
Gwanda	14	107	121	99	1,422	1,521	247	3	3	202	10	0
Enkeldoorn	14	100	114	149	1,717	1,866	303	4	6	251	17	6
Gatooma	20	475	495	577	22,237	22,814	3,897	7	10	2,923	17	6
Shamva	28	231	259	143	3,158	3,301	495	3	0	430	10	0
Sinoia	12	104	116	144	2,061	2,205	312	7	6	293	12	6
Belingwe	6	99	105	73	2,597	2,670	301	15	1	342	17	6
Ingutsheni Mental Hospital ...	44	210	254	13,991	61,641	75,632	6,790	1	4	11,202	17	6
Totals	740	3,055	3,795	28,973	151,237	180,210	26,514	14	10	26,224	15	8

TABLE 21.

STATEMENT OF PROGRESS AT GOVERNMENT HOSPITALS FOR THE YEAR 1927.

Name of hospital.	Total number of patients maintained.	Total expenditure.	NO. OF UNITS MAINTAINED.						EXPENDITURE.																EARNINGS.				REVENUE RECEIVED.			Revenue per cent. of total expenditure.	Cost per caput per diem on gross expenditure basis.	Loss to Government represented by deficiency of revenue against expenditure, each patient.	Proportion of total expenditure under Vote 7 B allocated on basis of European staff.	Per cent. of total.	TOTAL AMOUNT OUTSTANDING.	
			Staff.		Patients.		Total.		Provisions and medical comforts, excluding produce.	Per cent. of total.	Drugs, surgical instruments and sundries.	Per cent. of total.	Furniture, equipment, clothing and repairs.	Per cent. of total.	Fuel, light and water.	Per cent. of total.	Laundry staff and materials.	Per cent. of total.	Sanitary.	Per cent. of total.	Salaries.	Per cent. of total.	Office and other expenses.	Per cent. of total.	Paying patients.		Represented by treatment of free patients; allowing 5/- a day for whites and 2/6 a day for natives.	Total.	White.	Native.	Total.						At end of preceding year.	At end of present year.
			White.	Native.	White.	Native.	White.	Native.																	White.	Native.												
		£							£		£		£		£		£		£		£		£		£	£	£	£	£	£	£		s. d.	£ s. d.	£		£	£
Salisbury ...	3,226	20,843	16,638	21,598	23,565	31,469	40,203	53,067	6,389	30.66	2,472	11 87	1,774	8.51	2,487	11.94	457	2 19	40	0.19	6,558	31.47	174	0.84	10,270	1,810	3,830	15,910	8,159	1,377	9,536	45.76	4 6	3 10 1	492	2 36	4,768	5,289
Bulawayo ...	2,641	16,937	16,014	19,257	20,273	32,734	36,287	51,991	4,925	29.07	2,310	13.64	566	3.34	1,049	6.19	1,107	6.53	129	0.76	6,342	37.44	105	0.62	10,073	1,858	3,597	15,528	7,859	1,335	9,194	54.28	3 10	2 18 8	404	2.38	5,908	7,911
Umtali ...	788	4,333	2,489	4,582	5,499	8,390	7,988	12,972	1,419	32.75	566	13.06	92	2.12	253	5.84	136	3.14	108	2.49	1,667	38.47	16	0.37	1,718	404	1,290	3,413	1,341	370	1,711	39.49	4 2	3 6 6	76	1.75	494	535
Gwelo ...	909	4,740	2,660	5,375	4,210	15,926	6,870	21,301	1,531	32.30	580	12.24	134	2.85	274	5.75	172	3.63	169	3.56	1,808	38.16	6	0.13	1,639	744	1,728	4,111	1,314	513	1,827	38.57	3 4	3 4 1	66	1.39	688	1,106
Fort Victoria...	313	2,147	1,460	4,380	1,510	2,479	2,970	6,859	479	22.31	184	8.57	350	16.30	95	4.42	15	0.70	28	1.30	904	42.16	59	2.75	548	129	278	956	272	32	304	14.21	4 4	5 17 9	33	1.54	176	536
Gwanda ...	189	1,110	1,008	2,282	371	2,483	1,379	4,765	359	32.34	97	8.74	36	3.24	52	4.68	11	0 99	3	0.27	529	47.65	1	0.09	169	138	215	521	145	120	265	23.96	3 8	4 9 4	22	1.98	141	97
Enkeldoorn ...	185	845	730	1,825	445	2,080	1,175	3,905	305	36 10	57	6.75	35	4 14	30	3 55	26	3 08	27	3.20	341	40.36	2	0.24	129	42	247	417	116	24	140	16.57	3 4	3 16 3	22	2.60	117	114
Gatooma ...	1,005	4,169	1,990	6,922	2,799	26,167	4,789	33,089	1,343	32 22	405	9.71	361	8.66	260	6.24	120	2.88	53	1.27	1,515	36.34	46	1.10	1,253	627	2,894	4,774	830	482	1,312	31.47	2 2	2 16 10	66	1.58	533	714
Shamva ...	302	1,830	1,277	4,745	747	4,674	2,024	9,419	569	31.09	180	9.84	144	7.87	83	4.53	36	1.97	31	1.69	751	41.04	3	0.16	297	186	446	928	265	132	397	21.70	3 2	4 14 11	33	1.80	172	180
Sinoia ...	403	1,627	1,095	3,102	1,030	4,718	2,125	7,820	523	32.15	212	13.03	165	10.14	47	2 89	25	1.54	19	1.17	601	36.94	2	0.12	350	341	280	971	278	275	553	33.99	3 3	2 13 4	33	2.03	342	489
Belingwe ...	122	486	365	1,155	100	2,656	465	3,811	144	29.63	19	3.91	11	2.28	17	3.49	6	1.23	1	0.21	277	57.00	...	...	63	23	304	390	96	15	111	22.85	2 3	3 1 6	11	2.26	113	62
Ingutsheni ...	295	8,271*	4,745	7,450	18,259	67,995	23,004	75,445	2,326	28.12	127	1.53	1,831	22.14	222	2 68	91	1.09	...	...	3,319	40.13	224	2.71	1,094	811	11,405	13,487	909	844	1,927	23.29	1 8	18 15 10†	131	1.58	430	535
Totals ...	10,378	67,338	50,471	82,673	78,808	201,771	129,279	284,444	20,312	30.16	7,209	10 71	5,499	8.17	4,869	7.23	2,202	3.27	608	0.90	24,612	36 54	638	0.90	27,603	7,113	26,514	61,408	21,584	5,519	27,277	40.51	3 3	3 15 8	1,389	2.06	13,882	17,568

Sales:—£177 17 9

Sales:—£173 19 0

* Includes £803 5s. 3d., supplies from hospital farm and garden.

† In calculating this figure, value as above is deducted from total expenditure.